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PRODUCTION OF MEDICAL PERSONNEL THROUGH VOCATIONAL REHABILITATION

Jean S. Felton, M.D., Oklahoma City

The cost and results of rehabilitation programs are presented in order to correct the erroneous idea that patients who have been rehabilitated enter only the fields of crafts and custodial or protective work. In reality, the rehabilitative process also increases the number of professional workers. This paper reviews 20 years of experience in the Oklahoma State Division of Vocational Rehabilitation with reference to the paramedical occupations. The group of patients prepared for active professional life included, among others, 35 laboratory technologists, 26 nurses, and 17 physicians. The cost of their rehabilitation has been estimated and compared with the estimated earnings and anticipated income tax payments of the group. It is believed that the return to the government from this investment is about sixtyfold. To this must be added the special benefits accruing to society from the development of needed professional skills, the restoration of human dignity, and lessened need for public assistance to older people.

AS A RESULT of the repetitive and vast demands for manpower during World War II two operating principles of vocational rehabilitation became prevalent in America. The first was the conservation and improvement of all human resources and the other the utilization of the physically impaired in productive work. The limited needs for personnel at home and abroad in 1917 were of insufficient dimension to emphasize the potential role of the handicapped. However, war's aftermath of injured and ill brought about the passage of the first enabling legislation in the area of vocational rehabilitation.[1]

The program remained a somewhat narrow-gauge undertaking until the newer concepts of holistic care emerged from armed services' medicine toward the end of World War II. With the impetus given by the dignity-restoring measures of the Army and Navy hospitals in amputation, paraplegia, and plastic surgery centers and with the lessons learned from the employment of the handicapped in our wartime plants, businesses, and utilities, American medicine and industry underwent a reorientation of the needs and proved capacities of the physically marginal person. Supported through additional congressional measures,[2] the Office of Vocational Rehabilitation in the Department of Health, Education, and Welfare has aided

Professor of Preventive Medicine (Occupational Medicine), University of Oklahoma School of Medicine.

the states in restoring great numbers of citizens to effective states of production—demonstrating that with good and complete medical care, training, and placement, the person burdened with disease or injury residua could establish his place in the sun. (In the fiscal year 1955-1956, 65,640 persons were rehabilitated through the Office of Vocational Rehabilitation program, and 221,156 were rendered service.[3])

Unfortunately, many noninquiring groups have believed this effort to be unrelated to the creation of professional workers but concerned solely with the development of custodial, craft, or protective employees. Further, one often encounters voiced opinions that this is another step toward state control of professional activities. My objective in this article is to demonstrate the broader scope of vocational rehabilitation services and to point up the wisdom of investing small sums of federal and state money for a gain in the creation of physicians, nurses, and paramedical personnel and for the return of considerable tax moneys to national and state treasuries.

TABLE 1.—*Medical and Paramedical Personnel Rehabilitated by Year*

Yr.	Persons, No.
1937-1938	3
1938-1939	7
1939-1940	3
1940-1941	3
1941-1942	6
1942-1943	11
1943-1944	...
1944-1945	11
1945-1946	13
1946-1947	7
1947-1948	7
1948-1949	6
1949-1950	19
1950-1951	14
1951-1952	4
1952-1953	24
1953-1954	24
1954-1955	9
1955-1956	13
1956-1957	6
Total	190

A Case Load in Review

To determine the worth of a rehabilitation service program in the single area of medicine, the records of a 20-year period, 1937-1957, were reviewed in the Oklahoma State Division of Vocational Rehabilitation (DVR), and basic extrapolations were carried out which would permit a delineation of the persons given care, trained, and placed and would give an understanding of the financial accruals to tax-collecting agencies during the projected working lives of the rehabilitated clients. The DVR in this state functions similarly to all comparable agencies in that it is engaged "in rehabilitating physically handicapped individuals so that they may prepare for and engage in remunerative employment to the extent of their capabilities, thereby increasing not only their social and economic well-being, but also the productive capacity of the Nation. . . ."[4] To reach this goal, the DVR provides diagnostic and related services incidental to eligibility determination, training, guidance, and placement services. To correct or modify a physical condition which constitutes a substantial handicap to employment, corrective surgery or medical or psychiatric care is provided, along with hospitalization, prosthetic devices, maintenance during rehabilitation, prevocational, physical, and occupational therapy, and adjustment training. These comprise an "integrated program of medical, psychological, social, and vocational evaluation and services under competent professional supervision."[5] In some instances equipment and initial stocks and supplies for the establishment of a small business or vending stand are provided, but rarely was this type of service applicable to the group being considered.

This program results in manifold benefits—to the client who becomes gainfully employed, to the hospital which has an additional "paying" patient, to the physician rendering the surgical or medical care, to the employer who gains a worker, and to the federal and state governments which then will receive income taxes from the working rehabilitee.

Although the DVR cared for 18,706 clients during 1937-1957, only those persons relating to medicine or the paramedical occupations will be considered. This group comprised 1.01% of the total. In table 1 are shown the numbers of clients rehabilitated in the various medical occupational catagories. There were 89 men and 101 women in the group, from 18 to 64 years of age.

The postwar years saw a great acceleration in the numbers of clients rendered service, and, whereas those rehabiliated prior to World War II averaged 4 per year, the number increased after this to a mean of 11 per year, with a high point of 24 yearly during the period of 1952-1954, during and after the termination of the Korean conflict.

Table 2 depicts the occupational categories selected by the clients receiving service and shows the distribution by disability. Tuberculosis led the group with 42 clients (22.1%), poliomyelitis residua marked the second most frequent condition, with 25 (13.2%), and the third was bone and joint disorders, with 20 (10.5%). The largest single category of personnel rehabilitated was laboratory technicians (35), with professional nurses and practical nurses second at 26 each; dental technologists were third (18), and 17 physicians were fourth in the group. It is of interest that 26 (62%) of the former tuberculosis patients became laboratory or x-ray technologists. Five of the 15 amputee clients were trained as prosthetists. In all occupational categories there seemed to be a good matching of professional job demands with the physical capacities of the trainees.

The numbers of clients by disability category were studied, and it was found that the proportion of those who had had tuberculosis and who became clinical, laboratory, or x-ray technologists was considerably greater than, and statistically significantly different (chi square analysis [6]) from, those who entered the same occupational category from the groups poliomyelitis residua, bone and joint disorders, visual defects, and amputations.

The spectrum of disabilities encountered in this group is somewhat disproportionate to the case load seen in most rehabilitation centers. No clients with paraplegia or hemiplegia were seen here, and the number of clients with healed pulmonary tuberculosis is high. This is understandable, however, for the placement of these former patients in industry is difficult, since, apparently, some employers still have prejudicial attitudes toward these persons. Conversations with personnel directors in tuberculosis hospitals have indicated that many who have had tuberculosis have become employees in the institutions where they were patients. Of the amputees, 10 had single amputations of the lower extremity, 3 had double amputations, one had a single upper extremity amputation, and in one client three fingers had been amputated. Among those categorized as having visual defects were several who had had enucleations or unilateral blindness. None was totally blind. Only one individual had a psychiatric disorder (anxiety reaction), and she became a nurse. The bone and joint disorders other than osteomyelitis and postfracture states included arthritis, ankylosed joints, tuberculosis of the femur, and osteochondritis.

Cost of Rehabilitation

Expenditures made in the total rehabilitative process are concerned with such costs as training, physical examinations, prostheses, physicians' fees, maintenance, and supplies. (Physical examinations are conducted by different physicians from those performing the corrective surgery or carrying out specific modalities of care. Hence, this cost item is considered separately, even though the examinations are conducted by physicians and do represent physicians' fees.) In table 3 are seen the total costs per year for all clients in the categories considered here. The over-all cost for the 190 clients was $95,470 and averaged $533 per person rehabilitated, with a range from no cost to $5,282. (Eleven of the clients received services representing no direct costs, such as counseling, placement, or evaluation. The lowest direct expenditure for a rehabilitee was $2 for a cane.) The average cost of training was $466; the average physicians' fee, $47; the average cost of physical examination, $4; the average cost of prosthesis, $130; the average cost of maintenance, $416; the average cost of supplies, $231; and the average of other costs, $151. The greatest expenditures were for training ($62,881) and maintenance ($21,653). Training included, where appropriate, the sponsoring of a student par-

TABLE 2.—*Medical and Paramedical Clients Rehabilitated, by Disability and Occupation*

Disability	Clients		Persons by Occupation, No.																
	No.	%	Bacteriologist	Dental Technologist	Dentist	Dietitian	Laboratory Technologist	Medical Social Worker	Nurse	Nurses' Aide	Occupational Therapist	Optician	Optometrist	Pharmacist	Physician	Prosthetist	Practical Nurse	X-ray Technologist
Totals	190	100.1	4	18	9	6	35	1	26	11	1	1	3	11	17	7	26	14
Tuberculosis, pulmonary, stable	42	22.1	1				16	1	3	2	1				4		4	10
Poliomyelitis residua	25	13.2		5	2	1	6		5					1	5			
Bone and joint disorder, miscellaneous	20	10.5	1	3	2	1	2		3	1				3	2		2	
Visual defect	16	8.4		1	1				2	3			1	2	1		5	
Amputation	15	7.9		3	1										1	5	2	3
Fracture, malunion	8	4.2					1		2					1	1		3	
Hearing defect	8	4.2	1	1		2	1		1								2	
Osteomyelitis, chronic or well	8	4.2			2		1		1			1	1			2		
Congenital anomaly	6	3.2		1			1		1					1	1		1	
Dislocation of hip, congenital	5	2.6			1	1			2	1								
Convulsive disorder	4	2.1					1			2							1	
Heart disease	4	2.1					1		1						1		1	
Spastic paralysis	4	2.1					1			2				1				
Speech impairment	4	2.1	1	2			1											
Deformity, post-trauma, etc.	3	1.6					2							1				
Pulmonary disorder, miscellaneous	3	1.6							1				1		1			
Disfigurement of face	2	1.1							2									
Diabetes mellitus	2	1.1				1												1
Hernia	2	1.1															2	
Peptic ulceration	2	1.1												1			1	
Varicose veins	2	1.1							1								1	
Albuminuria, orthostatic	1	0.5					1											
Anxiety reaction	1	0.5															1	
Brucellosis, chronic	1	0.5		1														
Burn residua	1	0.5							1									
Hypertension	1	0.5		1														

tially or totally through medical, nursing, dental, or pharmacy school. If the client is deemed eligible in light of his potential, his age, his financial need, and his disability, he or the agency concerned will be given the funds necessary for the education. Fortunately, the supporting source of individual clients is not known to their classmates, and several of the physicians of the group were trained at the University of Oklahoma School of Medicine, without the DVR's relationship becoming common knowledge. The top figure of $5,282 was aid for one of the physicians who had undergone rehabilitation. For approximately $95,500, therefore, 190 medical professional or semiprofessional persons had been added to a tight labor market.

TABLE 3.—*Costs of Rehabilitation of All Medical and Paramedical Clients per Year by Category of Cost*

Yr.	Training, $	Physicians' Fees, $	Physical Examinations, $	Prostheses, $	Maintenance, $	Supplies, $	Other Costs, $	Total Costs, $
1937-1938	2,446		107	45			138	2,736
1938-1939	2,531		25					2,556
1939-1940	165			102				267
1940-1941	1,540				120	1,112		2,772
1941-1942	998				530	45		1,573
1942-1943	1,805	65		903				2,773
1943-1944	...	...	...	...	...	...	...	...
1944-1945	1,582			612	365			2,559
1945-1946	2,281	20	5	125	879			3,310
1946-1947	1,681	10		15	1,603			3,312
1947-1948	2,476	75	15	140	242		492	3,440
1948-1949	2,048	28	28		450			2,554
1949-1950	7,240	75	42	527	5,956			13,840
1950-1951	4,787	57	28	153	169		341	5,535
1951-1952	991		56	14	1,057		69	2,187
1952-1953	4,138	182	45	66	3,477		1,066	9,034
1953-1954	3,467	360		1,049	1,712		1,356	7,944
1954-1955	4,643	100		269	1,410		106	6,528
1955-1956	9,268	130		131	2,828		465	12,822
1956-1957	8,791	72			855		10	9,728
Totals	62,881	1,174	351	4,181	21,653	1,157	4,073	95,470

Return of Investment

If one were to consider the advantages accruing from the rehabilitation of these 190 persons, there would be many: the restoration of human dignity through the creation of productive citizens, the development of needed occupational skills, and, through this provision of training, the obviating of the individual's need for public assistance for himself or his dependents at a period in life when manual or unskilled labor is no longer possible. These are a few of the visible benefits; many are the intangible values as well.

To measure the process in terms of money alone, one may compare the costs of rehabilitation with the potential return to the governments whose agencies have expended funds to develop these 190 persons. If we use the figure of 65 years as the point of retirement—although in some instances of self-employed professional persons this falls short of the actual work life—one finds that about 5,643 man-years of productive effort will ensue. To be sure, some of the clients may marry and become housewives, others will change job categories, some will become ill for varying periods, and a few will die prior to the 65th birthday. But, lacking this information, we assume that a work span from date of completion of rehabilitation services to age 65 will be utilized.

Table 4 points up the amounts returned or to be returned to the federal and state governments by this group of 190 during the periods of their practice or work, in the form of taxes, on $34,224,012 of income. (In computing the income tax, a consistent estimated average figure was used for number of dependents for all clients.) It will be seen that $5,598,638 is the anticipated federal tax return, and to the state government, $179,425—a total of $5,778,063, or a return on the investment of over sixtyfold. In any economy, this would be considered a blue chip. For each $533 average cost per client for rehabilitation, there is $30,410 returned in income taxes during the work life of each of these medical or paramedical rehabilitees.

Comment

In an effort to demonstrate that vocational rehabilitation produces personnel other than craft, custodial, or service workers, the 20-year experience of the Oklahoma State Division of Vocational Rehabilitation was reviewed to identify medical and paramedical personnel who were rehabilitated. Of all clients rendered service in those 20 years, there were 190 rehabilitated persons who were trained for and engaged in practice or work in one or another of the medical professions or paramedical activities. Of 16 occupational categories into which

TABLE 4.—*Income Taxes Returned or to Be Returned by Rehabilitated Medical and Paramedical Personnel During Work Lives*

Occupation	No.	Range of Age When Rehabilitation Service Completed, Yr.	Anticipated Income of Total Group During Work Life to Age 65, $	Total Amount of Federal Income Tax Paid and to Be Paid Prior to Age 65, $	Total Amount of State Income Tax Paid and to Be Paid Prior to Age 65, $
Bacteriologist	4	26-40	588,000	100,800	1,526
Dental technologist	18	18-54	1,585,100	233,216	879
Dentist	9	24-35	4,088,494	617,232	39,478
Dietitian	6	22-28	1,061,402	183,000	2,659
Laboratory technologist	35	18-44	4,478,100	733,320	8,278
Medical social worker	1	38	121,500	21,060	321
Nurse	26	20-45	3,718,800	619,800	7,950
Nurses aide	11	18-64	627,320	81,384	...
Occupational therapist	1	36	104,400	17,400	223
Optician	1	22	219,300	38,400	718
Optometrist	3	25-39	1,028,970	203,734	8,219
Pharmacist	11	21-49	2,182,800	385,200	7,147
Physician	17	21-29	10,903,946	1,804,976	97,585
Prosthetist	7	19-56	1,162,800	205,200	3,708
Practical nurse	26	19-61	1,124,040	158,688	...
X-ray technologist	14	20-38	1,289,040	194,928	734
Total	190		34,224,012	5,598,638	179,425

the clients were placed through professional training, the following led numerically: nurses (professional and practical) 52, laboratory technologists 35, dental technologists 18, physicians 17, and x-ray technicians 14.

There were 26 different disabilities represented by the rehabilitees, the greatest number being stable pulmonary tuberculosis (22.1%), with poliomyelitis residua second (13.2%), bone and joint disorders third (10.5%), and visual defects fourth (8.4%). Of the former tuberculosis patients, 62% became laboratory or x-ray technologists.

The over-all cost for rehabilitating the 190 clients was $95,470, which averaged $533 per person, with a range from no cost to $5,282. Expenditures were made for training, physical examinations, prosthetic fees, physicians' fees, maintenance, and supplies. Not all clients represented direct costs, for in 11 cases services were received with no attached cost apart from overhead.

Some of the benefits accruing from rehabilitation of a professional group may be seen in the restoration of human dignity, the development of needed occupational skills, and the precluding of the need for public assistance at a period in life when unskilled labor is no longer possible. To measure the worth of the rehabilitation process in money alone, the anticipated work-life income has been calculated and the federal and state income taxes accruing from this income extrapolated from the date of termination of rehabilitation to age 65. The 190 persons would earn $34,224,012 in 5,643 man-work-years. From this income there would accrue to the federal government in income taxes the sum of $5,598,638 and to the state government in income taxes $179,425, representing a return on the rehabilitation investment of over sixtyfold. For each $533 average cost per client for rehabilitation, there is returned in income taxes $30,410 during the work life of each of the medical or paramedical rehabilitees.

Conclusions

Through the federal-state vocational rehabilitation program, professional persons have been trained for entry into the medical and paramedical professions. The investment of tax funds in the rehabilitation of professional persons is sound in view of the development of productive citizens in needed occupational categories, the restoration of human dignity, and the lowering of public assistance grants. The sixtyfold return on the investment in rehabilitation bespeaks the wisdom of rendering aid to those persons capable of undertaking professional curriculums.

801 N. E. 13th St. (4).

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ABSTRACTING MACHINE.—Scientists struggling with the flood of technical literature may soon get some mechanized assistance. H. P. Luhn of the International Business Machines Corporation has programmed a 704 computer to "read" articles (on punch cards) and to click out a crisp summary of their contents. The summary, which Luhn believes is as good as or better than a man-made abstract, consists of a few of the most significant sentences from the article, quoted in their entirety. To weigh significance the machine lists every word used in the text and counts the number of times each appears. Discarding trivial words such as "the" and "and," the automatic abstracter prepares a table of the most-used words. It then scans each sentence and picks out the ones that contain the greatest concentrations of these words. The highest-scoring sentences are printed as the abstract. Luhn points out that one advantage of the machine is that it judges significance objectively, not from the prejudiced point of view of a specialist. What its abstracts "lack in sophistication, they will more than make up for by their uniformity of derivation."—Science and the Citizen, *Scientific American*, June, 1958.

EFFECT OF RELAXIN ON NORMAL LABOR

Leslie V. Dill, M.D.
and
Joseph Chanatry, M.D., Washington, D. C.

Two preparations of relaxin, a water-soluble substance extracted from the bovine corpus luteum, were compared with a placebo in a series of 47 obstetric patients. The series included 24 primiparas and 23 multiparas. These were distributed among the three groups who received, respectively, relaxin A, relaxin B, and the placebo. The placebo, like the relaxin preparations, was given in diluted form by slow venoclysis. The three groups were compared as to duration of labor, degree of softening of the cervix, and other possible signs of an effect of the relaxin preparations on the course of delivery. No significant differences were found.

In 1926 a water-soluble extract of the corpus luteum of sows was found to contain a principle able to produce relaxation of the ligamentous structures of the pelvis of the castrated guinea pig.[1] The discoverer and his associates, after further laboratory investigation, adequately confirmed its existence in other animals and in the human and were able to demonstrate that it could be recovered in higher concentrations in the corpus luteum during pregnancy.[2]

Early investigations were carried out in the experimental animal, and most of the effects produced by this hormone were regarded only as interesting physiological phenomena. Early in 1955 the first report was made of its beneficial effect in forestalling the onset of premature labor,[3] and in the succeeding two years confirmation was to be had with highly purified commercial preparations of known potency.[4]

On the basis of a previous experiment carried out in the sow [5] that demonstrated a definite ability of relaxin to soften and dilate the cervix prior to the onset of labor, experiments were set up to determine its effectiveness in the human.[6] Shortly after that it was reported that the hormone was of value in reducing the length of labor [7] and in facilitating dilatation of the cervix. Our own results in tests with relaxin had been equivocal,[8] and in our opinion favorable reports were rendered impossible of interpretation by a failure to use untreated controls and by combining the unknown drug with a substance of known but unpredictable action (oxytocin).[7] In order to reevaluate our own pilot series and to appraise more thoroughly a substance which could have such potential value, a double-blind experiment was designed to investigate the effect of relaxin alone on the normal term gravida in labor.

Materials and Methods

From July, 1957, to February, 1958, we treated 47 patients with two commercial preparations of relaxin and one preparation of an inactive solvent. The patients were taken from the private practice of one of us and the clinic clientele of the other. They were unselected save for the following criteria: 1. There could be no medical or obstetric factors complicating the antenatal course or delivery. 2. The patient would have entered the hospital before the cervix had progressed to 5 cm. in dilatation. 3. The vertex would be presenting. 4. Engagement must be approximated.

When the observer was assured of progressive cervical dilatation and the os was opened not less than 3 and not more than 5 cm., the contents of a bottle containing 2 cc. of a liquid were diluted to 250 or 500 cc. with 5% glucose or normal saline solution, and intravenous injection was begun at such a rate that the contents would be exhausted in from 45 minutes to 1½ hours. The contents of the bottles were known to the examiner as a number and to the patient only as a "new substance that is designed to ease labor and cause the mouth of the womb to open with less difficulty."

The two commercial preparations of relaxin, of known potency, were utilized and were designated "A" (Releasin) and "B" (Cervilaxin). The third vial, labeled "C," was a control solution of solvent which appeared no different from the active preparation in packaging, viscosity, or color. The consistency of the cervix was determined at the onset of the experiment by sterile vaginal examination, which also confirmed the degree of dilatation and consistency of the cervix. Consistency of the cervical tissue that was similar to that of the lip was considered 1+, while a hardness that approximated the feel of the tip of the nose was considered 4+. Intermediate stages were labeled 3+ and 2+ according to the individual examiner's judg-

From the Department of Obstetrics and Gynecology, Georgetown University Hospital.

ment. After the infusion of the drug the sterile vaginal examination was repeated and the consistency reevaluated.

For the purposes of the experiment the onset of labor was said to have started not when contractions became progressive and/or regular but when cervical dilatation was known to have started and to have become progressive. Time was stopped at full dilatation. The projected course of cervical dilatation was estimated and placed on the chart, along with the estimated time of delivery, as the medication was started. For charting purposes the time of estimated labor was divided into quarters, and progress was graphed, with cervical dilatation as the ordinate and time in hours as the abscissa.

Medication for the relief of discomfort was given without regard for cervical dilatation or for the point of usage of the relaxing factor. Most of the patients had parenteral medication of moderate dosages of meperidine (Demerol) hydrochloride, and an adjuvant such as scopolamine hydrobromide, promazine (Sparine) hydrochloride, promethazine (Phenergan) hydrochloride, or a barbiturate. A few were rendered comfortable and delivered with the use of block anesthesia. Rarely

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TABLE 1.—*Comparison of Labor Time in Experimental and Control Groups*

	Primiparas		Multiparas	
	Patients, No.	Length of Labor, Hr.	Patients, No.	Length of Labor, Hr.
Relaxin (A)	9	9.2	7	5.0
Relaxin (B)	8	8.7	7	4.7
Total	17	9.0	14	4.9
Controls	7	9.0	9	4.2

amniotomy was utilized, and when it was thought necessary it was carried out well in advance of the infusion of the experimental material or well after the infusion was terminated.

After delivery, the actual time of delivery was charted and the curve of cervical progress completed for comparison with the estimated curve and prognosticated time of delivery. At the termination of the total experiment the number of each bottle was compared with the key and catalogued as to the type of material that it contained. It was found that the control material had been utilized on seven patients with the first pregnancy and on nine who were having the second or more. Seventeen of the primiparas and 14 multiparas had been given active medication (relaxin). The division between the two commercial preparations had been 16 for product A and 15 for product B.

Results

Of the 24 primiparas who received medication 17, or 61%, received relaxin and 7, or 29%, were given the placebo. The total length of progressive labor was smoothed off to average slightly less than nine hours in the experimental series and nine hours in those who received inactive material (table 1).

Fourteen multiparous patients (60%) received relaxin, and nine (40%) were given the placebo. The total length of observed labor in this group averaged less than five hours. It was slightly less although not significantly so in the control group—4.2 hours as against 4.9 hours in the experimental group (table 1).

TABLE 2.—*Degree of Softening of Cervix, During Experimental Periods, of Experimental Group and of Control Group*

	Primiparas		Multiparas	
	Patients, No.	Degree of Softening, %	Patients, No.	Degree of Softening, %
Relaxin (A)	9	5	7	25
Relaxin (B)	8	12	7	10
Total	17	8	14	17
Controls	7	17	9	10

In the primipara during the hour and a half of medication, the cervix was found to be softened approximately 8% in the experimental group and 17% in the control group (table 2). Softening of the cervix during this time in the multipara was estimated at around 17% in the experimental group and was found to vary insignificantly with the controls, in which it changed 10% (table 2). In the primipara (fig. 1, *top*) the calculated curve of the progress of labor closely accompanies the estimated

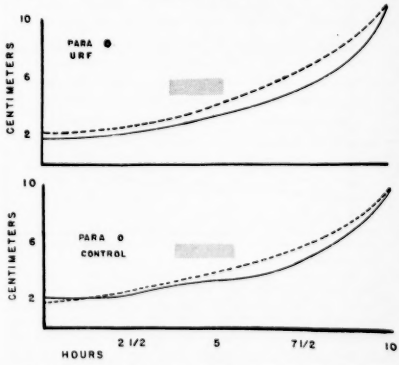

Fig. 1.—*Top*, calculated and estimated rates of cervical dilatation in primiparous patients who were given relaxin. Solid line shows observed rate, and interrupted line shows expected rate; crosshatching shows mean time during which medicament was infused. *Bottom*, observed and estimated rates of cervical opening for primiparous patients who received placebo. Not only do the estimated and observed rates closely follow each other but there is little difference in rate between patients given relaxin and the control groups.

one, and the time of prognosticated length of labor approximates the actual time (when both figures are smoothed to the closest number).

Figure 1, *bottom*, gives a graphic picture of the estimated and calculated curve of cervical dilatation of those primiparas in whom the placebo was employed. Here too the time of labor is seen to coincide with the estimated course in both the experimental groups. In the multiparous groups, too, the estimated course of dilatation of the cervix closely followed the calculated curve in both the experimental and control groups (fig. 2).

Comment

The difficulty is recognized of evaluating any drug or procedure that has as its end the alteration of so complex and variable a function as the dilatation of the cervix. In the absence of an impractically sized sample in each group the length of labor itself is merely a rough measure; the estimation of individual labor is no more than grossly usable; and even the degree of softening of the cervix is subject to individual interpretation. However, these criteria are the best we could follow.

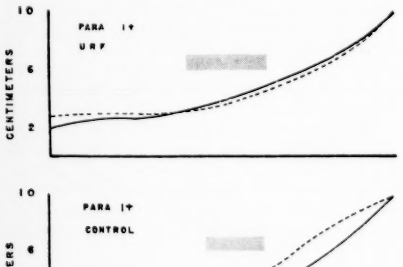

Fig. 2.—*Top*, estimated and observed rates of cervical dilatation for the multiparous patients who received relaxin. *Bottom*, estimated and calculated rate of cervical opening in control patients, showing no significant variation. On comparison with the top figure, it will be seen that the time of dilatation and the characteristic curve are not altered.

In the calculation of the total length of labor the onset was reckoned only after cervical dilatation had begun. Curves of estimated and observed cervical dilatation were smoothed. In calculating the averages, we took the nearest whole figure for the length of labor and diameter of cervix, rather than include fractional numbers. All these methods of simplification are not without objection, but for such a clear-cut experiment refinements of calculation seemed profitless.

In several instances two to three times the prescribed dosages of relaxin have been used in patients with extremely hard cervices, prolonged labors, and uterine dyskinesia to see if we could find a specific effect. Results have not been included in the above data, but no real effect has been recognized in any instance on either the degree of dilatation or change in consistency of the cervical tissue.

In such a multiphasic process as labor the isolation of any one portion (such as the effect of a drug on cervical softening) is not without possibility of error. We have had no method of determining the effect of the drug on uterine forces as labor progresses, and it is not inconceivable that its amelioration of uterine contractions could negate any effect that it might have in facilitating cervical opening. It is of interest, however, that experiments carried out to determine the effect of relaxin in the forces of labor have not shown any consistent effect on uterine contractions in the patient in active labor.[8]

Conclusions

Relaxin has been used on 47 patients in a double-blind experiment in an effort to evaluate its ability to cause increased softening of the cervix and to facilitate cervical dilatation in the course of normal labor. Within the limits of the designed experiment it has not been possible to demonstrate its value.

2431 K St. (7) (Dr. Dill).

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TREATMENT OF ACUTE LEUKEMIA IN CHILDREN AND ADULTS

John Louis, M.D., Heyworth N. Sanford, M.D.
and
Louis R. Limarzi, M.D., Chicago

Acute leukemia was treated in 46 children and 29 adults by five different therapeutic regimens. The largest group, consisting of 55 patients, received steroids (cortisone or prednisone) with 6-mercaptopurine; 9 received 6-mercaptopurine only, 5 received steroids only, and 6 received other forms of treatment. The remission rate for all the children treated was 77%; some went on to a second remission, and one went to a third. The rate of remissions for adults was only 17%, and there were no second remissions in any of the adult patients. The data on survival times proved difficult to compare. The duration of life was nearly the same in each group, as was the duration of therapy needed to induce remission. The duration of remission appeared to be longest in those patients who received a combination of 6-mercaptopurine and steroids, but the limited size of the other groups made comparison difficult. The steroid treatment caused a noticeable weight gain and some other undesired effects but no electrolyte imbalance, hypertension, or peptic ulcer. The undesired effect of 6-mercaptopurine was occasional, sudden, excessive leukopenia. The 50% survival time in the group who received 6-mercaptopurine was 9 months, and the 10% survival time was 19 months.

The introduction of the folic acid antagonists for the treatment of acute leukemia has opened a new era of hope for the leukemic patient. Not only has the prolonged survival time been symptom-free, but the effective use of metabolic blocking agents in acute leukemia was realized. Many new compounds have been and will be synthesized, yet only a fraction will filter through the maze of laboratory and clinical screening to become therapeutically useful. Since the incidence of leukemia is small, evaluation of newer agents has been a slow and empirical process. Accurate evaluation of newer agents requires comparison of their effects to those of known agents. Simultaneous comparisons, with random selection of patients, appear to be the most reliable method of analysis in order to minimize bias, account for changes in the natural course of the disease, and develop newer, more effective supportive measures. Only recently have such studies been possible through the cooperative participation of several institutions pooling their resources. The purpose of this report is to relate our experience in treating 75 patients with acute leukemia, primarily with simultaneous use of combinations of steroids and 6-mercaptopurine.

Methods

All patients with acute leukemia entering the clinic for treatment during the past four years were placed on therapy with combinations of steroids (cortisone, prednisone, or ACTH) and 6-mercaptopurine, regardless of age or state of disease. Exceptions were made to those patients who received antileukemic therapy before entering the clinic and to those placed in the acute leukemia cooperative study group. A critical evaluation of the response to therapy takes into account not only the antileukemic agents used but also the supportive care given to the patient. The latter was not uniform in this series since other physicians assumed management of these patients on some occasions. Our preferred details of care, including use of antibiotics only when indicated, no vitamins, and energetic investigation for complications accompanying acute leukemia were not always possible. In those patients with severe thrombocytopenia, platelet transfusions were not utilized in efforts to forestall the onset of fatal hemorrhage.

From the departments of medicine and pediatrics, University of Illinois and Research and Educational Hospitals.

Dosage.—6-Mercaptopurine was used in the standard recommended dosage of 1 to 2 mg. per pound per day. Cortisone dosage varied in children from 100 to 200 mg. per day and in adults from 200 to 300 mg. per day. Prednisone dosage in children ranged from 40 to 60 mg. per day and in adults from 60 to 100 mg. per day.

The initial dosage of steroids was maintained until a no apparent disease state was achieved. (The term "no apparent disease state" is used to denote the absence of leukemia by hematological and clinical examination at the time of observation, as defined by the criterion devised by the acute leukemia cooperative study group. Once this state is achieved and maintained the patient is then considered to have achieved a complete remission.) This dosage was then gradually decreased to main-

tenance levels sufficient to maintain the desired state of the disease without toxic side-effects. In 13 children who attained remission, the average maintenance dose of cortisone was 66 mg. per day (the range was 12.5 to 100 mg. per day), and in 3 receiving prednisone maintenance doses ranged from 10 to 20 mg. per day. During remission the dosage of 6-mercaptopurine was reduced to levels of 0.3 to 0.7 mg. per kilogram per day. The maintenance steroid dose in adults was 50 to 100 mg. per day in three patients receiving cortisone and 15 to 20 mg. per day in two patients receiving prednisone. The maintenance dose of 6-mercaptopurine ranged from 50 to 100 mg. per day.

The initial dosage of 6-mercaptopurine and steroids was maintained throughout the course of the disease in those patients not achieving a remission. The dosage of 6-mercaptopurine in adults was 50 to 500 mg. per day (0.7 to 3 mg. per pound); in addition, 3 received ACTH (20 to 100 mg. per day); 11 received cortisone (75 to 400 mg. per day); and 4 received prednisone (15 to 40 mg. per day). In children 0.2 to 1.3 mg. per pound per day of the 6-mercaptopurine was given in addition to cortisone in six (25 to 75 mg. per day) and prednisone in two (60 to 80 mg. per day).

Return visits to the outpatient clinic were at weekly intervals until a no apparent disease state was achieved, after which return visits were reduced to three-to-four-week intervals. During each visit hematological evaluation consisted of determining the hemoglobin level, the total white blood cell count, and the differential count of the blood. Other hematological tests were performed whenever indicated. Bone marrow examinations were performed initially and whenever the disease state was in question. Classification of the disease state was based on peripheral blood, physical features, and clinical features and did not include bone marrow evaluations. The criteria used in evaluating these features were those revised by the acute leukemia cooperative study group.[1]

Results

There were 75 patients: 46 children (19 female and 27 male) and 29 adults (15 female and 14 male). Five regimens were used: 1. Fifty-five patients received steroids with 6-mercaptopurine. 2. Five patients received steroids with folic acid antagonists. 3. Five received only steroids. 4. Nine were given only 6-mercaptopurine. 5. One child received 6-mercaptopurine with 6-diazo-5-oxo-L-norleucine (DON). A summary of patients is given in the table.

TABLE 1.—*Summary of Data on Patients with Acute Leukemia Treated with Different Antileukemic Regimens*

	Patients, No.		Age, Yr.		Onset of Symptoms to Onset of Therapy, Wk.		Onset of Therapy to Beginning of Remission, Wk.		Duration of Remission, Wk.		Remission, %	End of Remission to Death, Wk.		Duration of Life, Wk.		Duration of Treatment, Wk.	
	Total	Males	Range	Mean	Range	Mean	Range	Mean	Range	Mean		Range	Mean	Range	Mean	Range	Mean
Steroids + 6-mercaptopurine																	
Children																	
Remission																	
< 15	16	14	2.5-15	6.5	0.7-21	5.27	2-14	5.4	2-68	20.1	76	0-28.3	10.6	21-91	44.9	15.1-77.1	37.8
> 15	3	1	17-19	18.3	6.4-21.3	9.2	3-5.4	4.5	3-28	9.0	60	5.4-14.6	10	24-44.1	37.4	19-38	26.6
No remission																	
< 15	5	2	0.25-11	8	0.3-11	1.5	...	...	...	...	24	...	...	2-15.4	7.0	1.6-13.4	6.5
> 15	2	1	17-19	18	2.5-32	...	...	...	...	...	40	...	...	5.7-54.0	...	3.2-28	...
Unknown outcome	6	3	2.5-15	...	...	...	...	...	...	...	18.8	...	...	...	...	...	...
Adults																	
Remission	5	3	33-66	36.3	4-12	8.2	2.9-10.0	4.9	4-23.9	12.3	22.6	2-15	9.04	17.3-49.2	34.6	11.4-37.2	26.7
No remission	17	7	20-66	44.1	2-31.4	11.4	...	...	...	...	77.4	...	...	5-36.7	17.4	0.7-29.3	6.7
Unknown outcome	1	1	33	...	12	...	...	...	...	...	4.3	...	...	...	...	...	...
Steroids + antifolic acids	5	4	1.5-8	7.7	2-24.0	9.8	2-10	5.3	2-35	13.1	100	5-16.9	10.9	21.3-98.0	46.4	21.6-74.0	41.5
Steroids only																	
Children	3	1	2.5-9.0	...	1	...	3.3-2.9	...	10-36	...	100	5-15.3	12	44.3-134.3	...	31.9-132	...
Adults	2	2	38-43	...	18.9-24.7	...	...	...	...	...	100	...	...	28.7-32.7	...	4.7-8	...
6-Mercaptopurine only																	
Children																	
Complete remission	1	1	4	...	6	...	3.1	...	4	...	25	14.7	...	27.8	...	21.8	...
Incomplete remission	1	...	6	...	24	...	4.4	...	3	...	25	2.7	...	52	...	10.1	...
No remission																	
Later with antifolic acids	1	...	3	...	4	...	6.3	...	7.6	...	25	24.4	...	42.3	...	38.3	...
Never	1	...	3	...	7.6	...	...	...	...	...	25	...	...	...	10.2	...	2.6
Unknown outcome	1	...	3	...	6.0	...	...	...	...	...	20	...	...	...	...	...	...
Adults—No remission	4	1	28-72	48.7	4.6-21	10.1	...	...	...	...	100	...	...	1.25-21.7	9.4	0.7-2	1.3
6-Mercaptopurine + DON	1	...	5	...	18	...	8.6	...	8.9	...	...	16.5	...	52	...	34	...

6-Mercaptopurine–Steroid Group. — Thirty-two children and 23 adults were treated with a combination of 6-mercaptopurine and steroids.

Children: Of the 32 children treated, 6 were lost in follow-up. A no apparent disease status occurred in 16 out of 21 (76%) patients less than 15 years of age.

The duration from onset of therapy to onset of complete remission ranged from 2 to 14 weeks (mean, 5.4 weeks; median, 4 weeks; 95% limits, 1.4 to 9.2 weeks). (The median was taken as the 50% survival intersect of the best visual linear regression of cumulative survival data plotted on log-probability paper; 95% limits were taken as the ±2 probit intersects of the same line.)[2] Complete remission was maintained from 2 to 68 weeks (mean, 20.1 weeks; median, 14.0 weeks; 95% limits, 3.1 to 66.0 weeks). During remission patients were completely asymptomatic and were able to attend school and to participate in normal recreational activities. Initial hemoglobin levels ranged from 2.4 to 13.5 Gm. per 100 ml. Twelve patients had anemia, two requiring transfusions. During remission hemoglobin levels ranged from 11.7 to 14.7 Gm. per 100 ml. (mean, 13.3 Gm. per 100 ml.). Initial white blood cell counts ranged from 7,000 to 176,800 cells per cubic millimeter (three with less than 2,000, five with more than 15,000). During complete remission leukocyte counts ranged from 4,200 to 12,000 cells per cubic millimeter (mean, 5,800 cells per cubic millimeter). The total circulating granulocytes initially ranged from 0 to 3,000 cells per cubic millimeter (3 with more than 1,500 cells per cubic millimeter) and during remission ranged from 1,800 to 8,400 cells per cubic millimeter (mean, 3,200 cells per cubic millimeter). The segmented neutrophils predominated the peripheral blood during remission (range from 47.74 to 74%. No blast cells were observed in the peripheral blood during remission. In all patients the rapid appearance of blast cells in the peripheral blood heralded the onset of relapse. In two a concomitant reduction in hemoglobin level also occurred. Treatment was usually altered after regression (relapse) from a no apparent disease state. Six patients remained on the combination 6-mercaptopurine–steroid regimen throughout the entire course of their illness. One attained a no apparent disease state for the second time which lasted seven weeks. Three other patients who remained on therapy with the 6-mercaptopurine–steroid combination received in addition folic acid antagonists. A moderate disease state was induced in one patient. One of two patients who received a combination of aminopterin and steroids achieved a second complete remission. A second remission occurred in one of two patients given aminopterin. Another patient received 6-mercaptopurine without effect. Two patients died while in a no apparent disease state. The reasons for these deaths could not be explained at autopsy. Three patients died from massive hemorrhage, eight from overwhelming infection, two from central nervous system complications, and one from unknown causes.

The duration of life from onset of symptoms to death ranged from 21 to 91.2 weeks (mean, 44.9 weeks; median, 35 weeks; 95% limits, 15 to 80 weeks). Duration of treatment from onset of treatment to death ranged from 15 to 77 weeks (mean, 37.8 weeks; median, 32.2 weeks; 95% limits, 10.4 to 100 weeks).

In three patients between the ages of 15 and 20 years a no apparent disease state was obtained 3, 5, and 5.4 weeks after the onset of treatment. This state was maintained for periods of 3, 5, and 28 weeks. All of these patients died from septicemia 5.4, 10, and 14.6 weeks after the end of the no apparent disease state. Only one remission was seen, and one regimen was used throughout the entire course of the disease.

Therapy with a combination of 6-mercaptopurine and steroids failed to induce a no apparent disease state in seven patients. Five were treated for less than two weeks, which did not appear to be a sufficient interval for the effect of the agents to become manifest. All of these patients died from fatal hemorrhage. If these are eliminated, the remission rate for this combination would be 19 out of 21 patients (90%) for the 0-to-20-year-old group. The leukemic state in the other two patients did not appreciably change for 13 and 28 weeks respectively. One eventually died from a massive hemorrhage and the other from Pseudomonas aeruginosa septicemia. Initial hemoglobin levels were less than 10 Gm. per 100 ml. in four patients. All patients had profound anemia at the time of death. Leukocyte counts ranged initially from 9,800 to 180,000 cells per cubic millimeter (4 with more than 15,000 per cubic millimeter); the majority of the patients had elevated leukocyte counts. The interval between the onset of symptoms and the onset of treatment ranged from 0.3 to 32 weeks (mean, 6.3 weeks) in the patients with no remission and 0.7 to 21 weeks (mean, 5.3 weeks) in patients attaining remission.

Adults: In the adult group a no apparent disease rating was achieved in 5 out of 23 (22% remission rate) patients with leukemia 20 years of age or older. Complete remissions occurred during the 3rd week of therapy in three and during the 5th week and 10th week in the other two patients. Complete remission was maintained for 4 to 24 weeks. This state was achieved only once in each patient. Combinations of steroids and 6-mercaptopurine were the only agents used during the entire course of the disease. The average duration of therapy was 26.7 weeks (range, 11.4 to 37.2 weeks), and the duration of life from the onset of symptoms ranged from 17.3 to 49.2 weeks (mean, 34.6 weeks). Three patients died from septicemia, one from intracranial hemorrhage, and the other from undetermined causes.

In 18 patients no effect from the combination of 6-mercaptopurine and steroids could be seen. The outcome of one patient is unknown. Nine were on therapy with the combination for four weeks or less, five between 4.1 and 6 weeks, and three for 8.9, 11.0, and 29.3 weeks. During the first month of therapy four patients died from fatal hemorrhage, three from infection, one from renal failure, and one from unknown cause. Hemorrhage and infection accounted for an equal number of deaths in the remaining patients surviving longer than four weeks of therapy. Steroids and 6-mercaptopurine were the only agents used in the treatment in this group. Patients attaining complete remission lived twice as long (mean, 34.6 weeks) as those who failed (mean, 17.4 weeks). The interval between onset of symptoms to onset of treatment was 8.2 weeks (range, 4 to 12 weeks) in the patients attaining a remission and 11.4 weeks (range, 2 to 31.4 weeks) in those who did not develop a remission. The remaining groups were too small for a valid statistical study and are, therefore, described for crude comparison.

Aminopterin-Steroid Group.—All five patients treated with a combination of aminopterin and steroids were children, with ages ranging from 1.5 to 8 years; four were males. Remission occurred in four after 2 to 10 weeks of therapy and was maintained for 2 to 35 weeks. Duration of life in this group ranged from 21.3 to 98.0 weeks. The time from onset of symptoms to beginning of treatment ranged from 2 to 24 weeks. Four patients attained a complete remission. The fifth patient developed a remission after a second course of therapy with a combination of 6-mercaptopurine and cortisone. A second remission (six and nine weeks in duration) occurred in two out of four patients who were given a combination of 6-mercaptopurine and steroids. Three patients died from septicemia, two from massive hemorrhage, and one from a combination of intracranial hemorrhage and bronchopneumonia.

Steroids.—The disease state rapidly regressed in the two adult patients treated with steroids. Both were males, aged 38 and 43. One died from a combination of multiple hemorrhages and bronchopneumonia after 4.7 weeks, and the other died 8 weeks after the onset of therapy from pulmonary infiltration and edema. Three children, aged 2.5, 8.5, and 9 years who were initially treated with only steroids progressed to a no apparent disease state 2.9 and 3.3 weeks after initiation of therapy. Complete remission was maintained for 10, 14, and 36 weeks. A second remission occurred in all three 4, 6, and 26 weeks after termination of the first remission, with use of regimen 1 in two and regimen 4 in one patient. The second no apparent disease state lasted 6, 8, and 37.6 weeks. A third remission of 12.7 weeks duration occurred in one patient 3.3 weeks after termination of the second remission. A combination of aminopterin and ACTH was used. The duration of life was 44.2, 72, and 134.3 weeks. The causes of death were massive hemorrhage, septicemia, and subdural hematoma respectively.

6-Mercaptopurine.—Four adults, aged 28, 39, 56, and 72 died 0.7, 1, 1.7, and 2 weeks after the beginning of 6-mercaptopurine therapy. One died from a coronary infarction and two from massive intracranial hemorrhage. The cause of death was not determined in the fourth patient. Of five children treated (three aged 3, one aged 4, and one aged 6) a moderate disease state occurred in one and a no apparent disease state in two. Remissions were maintained for 3, 4, and 7.6 weeks. Second remissions did not occur despite use of other agents. The duration of life in those with remission was 27.3, 42.3, and 52 weeks and in those without remission 3 and 7.6 weeks. Massive hemorrhage was the cause of death in all except two of the patients undergoing remission. These two died from bronchopneumonia and septicemia.

Comment

The remission rate for all the children treated was 76.9%. If those who died in less than one month after initiation of therapy are eliminated the remission rate is greater, 95%. Nine patients attained either a moderate or no apparent disease state for the second time, after a second course of therapy. In the adult series the remission rate was much less (17%). If those adults who died during the first month of therapy are eliminated, the remission rate is greater, 38.5%. Remissions occurred only in those adults treated with a combination of 6-mercaptopurine and steroids. After relapse subsequent remissions did not occur in any of the adult patients.

Statistical comparison of the effectiveness of the different regimens used in this series would be of little value because of the small number of patients in each group. This is particularly true for the adult patients, since only five were treated with regimens other than combinations of 6-mercaptopurine and steroids. The duration of life appears to be almost equal in each group, being slightly longer in the aminopterin-steroid patients and least in the patients receiving only 6-mercaptopurine. The duration of therapy required for remission was also similar, being slightly longer in those patients given only 6-mercaptopurine and least in those receiving only steroids. The duration of remission appeared longest in those patients who received a combination of 6-mercaptopurine and steroids. The duration of remission was least in the adult patients.

Second remissions were induced in nine children (27.3%), and one achieved a third remission. The duration of life subsequent to the end of remission was similar in all the groups. This was longest in the group who initially received only steroids.

At a casual glance, the remission rate appears higher in this series than those reported by other workers.[3] Patients in this series, however, were classified only on the basis of clinical and peripheral blood findings rather than also on the basis of marrow changes. If bone marrow findings had been evaluated, the remission rate in all likelihood would be similar to those reported by other investigators. The 50% survival time in the 6-mercaptopurine-steroid group was 9 months, and the 10% survival time was 19 months. Burchenal and coworkers [4] reported a 50% survival time of slightly over 12 months in patients receiving sequential therapy of aminopterin, steroids, and 6-mercaptopurine. This difference in survival time may not be entirely accounted for by the difference in method by which antileukemic therapy was used. The mean duration of life was 33 weeks in patients treated prior to 1956 and 52 weeks in those treated after 1956. The 50% survival time in the former group was 28.5 weeks and in the latter 41 weeks. This increased survival time is probably the result of increased experience in use of these agents and more efficient liaison between the hematologist and the attending physicians.

Side-effects from combination therapy were not distressing. Weight gain and Cushingoid changes occurred in all of the patients treated with steroids and, except for cosmetic reasons, were of little significance. No instance of electrolyte imbalance, hypertension, or peptic ulcer occurred. Side-effects from 6-mercaptopurine were also minimal except in those patients who developed sudden reductions in the leukocyte count. This occurred one to two weeks after the onset of therapy. Significant lowering of the white blood cell count occurred in 31 out of 52 patients. These drops in the count ranged from 280,000 to 3,700 white blood cells per cubic millimeter within a two-week period of therapy. In 13 patients the white blood cell count was reduced to less than 2,000 cells per cubic millimeter and in 3 patients to less than 1,000 cells per cubic millimeter. The development of leukopenia posed the problem of differentiating between drug aplasia and leukemic myelophthisis. The inability to aspirate bone marrow in some instances added to the dilemma. Marrow samples could usually be obtained by aspiration from several sites. If spicules were not obtained examination of the sinusoidal blood was often informative. The presence of large numbers of blast cells in the sinusoidal blood was usually regarded as indicating myelophthisis. Myelophthisis, in this series, was found in each instance of leukopenia.

Summary and Conclusions

Seventy-five patients, 46 children and 29 adults, with acute leukemia were treated primarily with a combination of steroids and 6-mercaptopurine. The complete remission rate was 76% but might have been less had bone marrow evaluations been obtained. Side-effects from this combination therapy were minimal.

Leukopenia occurring during 6-mercaptopurine therapy was associated with myelophthisic marrows in this series. This effect was usually seen during the first two weeks of therapy. This may be the result of increased removal of blast cells from the blood, alterations in the release mechanism of the marrow, or temporary initial stimulation of blast proliferation from drug therapy. The remission rate appeared to be higher in the 6-mercaptopurine–steroid group. The 50% survival time, however, was three months less than that reported in other series. Proficiency in the use of these agents and improved supportive care may be the principal factor in the difference. In our opinion the question of the validity of sequential antileukemic therapy versus combined steroid-antimetabolic therapy is not entirely settled and warrants further investigation.

840 S. Wood St. (12) (Dr. Louis).

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PROMAZINE, MEPERIDINE, AND SPINAL ANESTHESIA FOR LABOR AND DELIVERY

Stanley P. Wegryn, M.D.
and
Robert A. Marks, M.D., New Orleans

Promazine and meperidine in labor afford a method of analgesia and relaxation which appears superior and safer than other modalities in common usage. Ease of administration and minimal side-effects are of particular merit. One hundred consecutive patients were treated with promazine and meperidine followed by spinal anesthesia. The dose of promazine was fixed at 50 mg., given intravenously, for each patient. After medication with promazine, 25 mg. of meperidine was administered intravenously when indicated. Routinely, 50 mg. of meperidine was set as the limit; however, exceptions were made. All patients were given absolute bed rest. Total evaluation showed 57% with excellent results, 29% good, 12% average, and 2% poor. The only patients who should be excluded from the promazine routine are those with a history of asthma. We feel that the nasal and throat congestion may be a reflection of the same processes occurring in the respiratory tree of asthmatics.

In recent times the management of childbirth has developed from the witchery of ancient midwifery to the art of obstetrics, with a steady search for the perfect control of labor and delivery. Major advances in this encyclopedia of medicine have been the development of forceps, antisepsis, and blood banks; and the use of oxytocin (Pitocin), meperidine (Demerol), scopolamine, and antibiotics.

Recently we have used a new technique in the control of labor. This technique was suggested to us by Kuntze and Sison before their article was published.[1] In essence, it is the use of promazine (Sparine) intravenously during labor. Kuntze and Sison and Sprague [2] have employed promazine in labor in conjunction with varied doses of meperidine and scopolamine.

Sprague administered 50 mg. of meperidine, 50 mg. of promazine, and 0.01 mg. of scopolamine intravenously when any analgesia was required in labor. In 86% of his patients he found this procedure to be adequate for excellent analgesia. He used as supplements in the remaining 14% varying doses of the intitial medicaments.

Kuntze and Sison administered 50 mg. of promazine intravenously on admission or when regular contractions were established. This was followed by, or given with, variable doses of meperidine. A small percentage also received scopolamine, atropine, or a barbiturate. In his series, 70% were evaluated as having excellent results.

In both these series the high majority of the patients were delivered under general anesthesia, though a few were delivered with saddle block and only 25 mg. of promazine. Apparently, these authors were concerned with the hypotensive side-effects of both promazine and spinal anesthesia.

In several cases we began to use promazine and meperidine for labor; delivery was accomplished by use of a low spinal anesthesia with 5 mg. of tetracaine (Pontocaine). Our results were so satisfactory that we felt a need for a series of cases to evaluate fully the use of promazine and meperidine in labor followed by spinal anesthesia. No scopolamine is used in our service. We feel amnesia is not a requisite for a properly managed labor. For similar reasons we employ low spinal anesthesia, except where contraindicated.

Initially, we also noted that the use of promazine offered a technique that might easily be standardized for large charity-type hospitals with safety. Therefore, we set out to (1) evaluate the intravenous use of promazine in labor; (2) standardize our procedure; (3) evaluate the side-effects of promazine, especially the hypotensive reaction; and (4) equate these with the best welfare of mother and child in comparison with standard techniques.

Promazine

Promazine, a phenothiazine group drug related to chlorpromazine and promethazine (Phenergan), has many reputed actions and side-effects. The depressive action is particularly on the reticular portion of the nervous tissue. The cortex is not depressed but, rather, the subcortical areas. This drug also depresses the vomiting center. The patient retains full mental capacities, with a relaxing po-

From the Department of Obstetrics and Gynecology, U. S. Public Health Service Hospital.

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tential such that the patient appears to be under hypnosis or a quasi-hypnosis such as is used by Read. The potentiating effect of promazine on narcotics has been noted by many workers.

The side-effects of promazine may be divided into minor and major. Under the minor group are allergic skin reactions,[3] generalized pruritus,[3a] dryness and congestion of the nose and throat,[4] constipation,[3a] lethargy,[3] photophobia,[3b] transient blood pressure elevation,[4a] and false-positive frog tests.[5] Under the major group are hypotension,[6] granulocytopenia,[7] convulsions,[8] and jaundice.[9] (In the one case of jaundice reported, the patient also received chlorpromazine.)

Death from promazine therapy has been rare. Of 18 cases of granulocytopenia, 4 ended fatally. In this group, the lowest dose of promazine was 25 mg. given three times a day, and the shortest duration of therapy was 10 days. The average doses were much higher.

The hypotensive effect has been reported as slight and transient, mostly postural in character and easily combated with bed rest or, rarely, with levarterenol. (It has been noted that epinephrine and promazine together have a marked hypotensive effect.) Under this discussion some comment must be made of the marked hypotension noted in patients with an asthmatic syndrome who receive promazine. It has come to our attention from several clinicians [10] that in patients with asthmatic syndromes who received promazine a precipitous hypotensive effect may be noted. This reaction was almost impossible to reverse. This problem has not as yet been fully investigated; however, we believe some awareness of the problem is desirable before detailed studies are made.

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Procedure

It was our objective to evaluate 100 consecutive patients treated with promazine and meperidine followed by spinal anesthesia. The dose of promazine was fixed at 50 mg., given intravenously, for each patient. This dose was given when the patient was thought to be in labor but not when the cervix was dilated beyond 4 cm. or when the patient was expected to deliver within three hours. The procedure was soon modified so that all patients were given promazine except when delivery was expected within one hour. Caution was also advised in cases of prematurity, bleeding, and any fetal complication. It was not our feeling that these were absolute contraindications, but with inadequate experience caution must be observed. All patients with a history of asthma were also excluded from the series for reasons given previously.

After medication with promazine, 25 mg. of meperidine was administered intravenously when indicated. Routinely, 50 mg. of meperidine was set as our limit; however, exceptions were made. All patients were given absolute bed rest. From the time of admission through delivery each patient was attended constantly by us or by an intern. At all times we were within minutes of the labor suite for consultation and evaluation. Blood pressure determinations and fetal heart rate studies were made one minute after promazine administration, again in 15 minutes, then 30 minutes, one hour, two hours, the last hour of labor, before spinal anesthesia, and at 5-minute intervals after the spinal injection. During labor the following conditions were also evaluated: patient's response to questions, perineal relaxation, nausea and vomiting, and whether the patient was awake or dozing. The spinal injection of 5 mg. of tetracaine was given with the patient in the horizontal position. The level of anesthesia was then regulated. After delivery the blood loss was estimated. Response of each baby was graded as alert, drowsy, or asleep. The mother was noted to be either awake or asleep after delivery. All stages of labor were calculated, and amnesia, if any, was noted.

Each case was then totally evaluated by the following scale: "excellent" if the patient was relaxed and displayed no evidence of pain or discomfort while in the labor room (32 primiparas and 25 multiparas in our series); "good" when the patient experienced some slight pain or discomfort with contractions near the end of labor (18 primiparas, 11 multiparas); "average" when the patient experienced pain or discomfort with contractions for a significant part of labor (4 primiparas, 8 multiparas); and "poor" when pain and discomfort were noted throughout labor with or between contractions (2 primiparas, no multiparas).

Statistical Results

Our statistics were based on 100 cases handled in the routine outlined above. Fifty-six patients were primiparas. All cases not handled in that manner (i. e., not given promazine because of a history of asthma, not given spinal anesthesia either by choice of the patient or by contraindication, or not given promazine because of lack of time) were eliminated from the series.

Of the study group, total evaluation showed 57% with excellent results, 29% good, 12% average, and 2% poor. In the last two groups, 14 patients were involved. Of the two whose responses were poor, one had a breech delivery (primipara) with promazine given 30 minutes before delivery and the other (primipara) received promazine 9 hours and 11 minutes before delivery. This patient received only 25 mg. of meperidine. Of the 12 with average results, 4 had been given promazine more than 7 hours and 50 minutes before delivery; 1 of these received the drug 18 hours and 30 minutes before delivery. Of the remaining eight, one had a transverse arrest, two had occiput posterior deliveries, one was a markedly neurotic woman, two

received promazine less than one hour before delivery, and two had an apparently average labor and delivery.

After administration of the promazine, 59% of the patients had a transient mild blood pressure elevation that reverted to normal in several minutes. From the time of administration of the promazine to immediately prior to the spinal injection, an average depression of 7 mm. Hg systolic and 8 mm. Hg diastolic was noted. The maximum depression was a systolic drop of 40 and diastolic of 30 mm. Hg. The systolic depression occurred in one patient whose blood pressure dropped from 140 to 100 mm. Hg systolic on one occasion one hour after promazine administration; the diastolic drop was from 80 to 50 mm. Hg 30 minutes after promazine was given. There were no other systolic pressures below 90 mm. Hg, nor was there clinical hypotension.

The fetal heart tones were found to be within normal limits in all but one case. At delivery in this case a single coil of umbilical cord was about the infant's neck.

After the spinal injection, the average blood pressure depression was 13 mm. Hg systolic and 9 diastolic. The maximum systolic drop was 40. This patient's blood pressure went from 130 mm. Hg before spinal injection to 90 on two readings after it. The maximum diastolic drop was from 85 to 55, a drop of 30 mm. Hg. Again, there was no clinical hypotension.

The average length of labor was 8 hours and 49 minutes. The average time from promazine administration to delivery was 3 hours and 43 minutes. The minimum was 30 minutes; the maximum was 18 hours and 30 minutes. The average estimated blood loss was 220 cc. The average dose of meperidine was 35 mg. The range was from 0 to 200 mg. During labor 76% of the patients dozed and were relaxed throughout, while 64% slept post partum. Nausea or vomiting occurred in 22%; however, in most cases it was transitory and occurred at full dilatation of the cervix. During labor all the women responded to questions and requests. After delivery 31% showed some amnesia for part or all of the labor.

Eighty-five per cent of the newborn infants were fully alert and had a vigorous cry at delivery; 12% were drowsy. Of this group of 12, 2 were breech deliveries, 2 had an excessive amount of mucus, one had been in fetal distress prior to delivery, in one 200 mg. of meperidine had been administered, and in another there was third-stage hemorrhage. The five remaining deliveries were uneventful. There was no real problem in any of these newborn infants. They responded to suction and stimulation. However, two babies were evaluated as "sleepy." Here, resuscitation with oxygen was more difficult, but the babies responded within several minutes. One case was of relative cephalopelvic disproportion where the delivery was prolonged and difficult. The other was an uneventful labor and delivery. We had one anencephalic newborn infant.

It was noted that in 96% of the patients there was a marked relaxation of the perineum similar to that achieved with spinal anesthesia. The side-effects were few. The most prevalent was a strange congestion of the patient's nose and throat that was described as a tickling, stuffy, choking, or shortness of breath sensation on administration of the drug, lasting less than one minute. Pupillary changes and transient tachycardia [4a] on administration of the drug were noted with some patients.

Comment

Promazine and meperidine in labor afford a method of analgesia and relaxation which appears superior and safer than other modalities in common usage. Ease of administration and minimal side-effects are of particular merit.

The hypotensive effects of promazine and spinal anesthesia do not seem to be significant deterrents to their use. We encountered no clinical hypotension at any time with our methods.

Promazine, in the dosage used, does not appear to result in any marked depressive reaction on the infant at any time, regardless of when administered. The effective duration of action of 50 mg. of promazine given intravenously is about eight hours. In multiparas, the promazine should be administered at the onset of labor. For primiparas, the promazine might well be delayed until the patient shows some discomfort; otherwise, for effective results, the promazine may have to be repeated in eight hours.

The only patients who should be excluded from the promazine routine are those with a history of asthma. We feel that the nasal and throat congestion may be a reflection of the same processes occurring in the respiratory tree of asthmatics. This topic needs further study.

Promazine had a marked relaxing effect on the perineum and a depressive reaction on the vomiting mechanism. It seems also to have some amnesic properties. The reduction of the dosage of meperidine, the elimination of barbiturates and scopolamine, and the minimal use of medications outlined seem to maintain a pleasant and relaxed air in the entire labor suite.

210 State St. (18) (Dr. Wegryn).

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CARDIAC DISEASE AND HYPOTHYROIDISM

COMPLICATIONS INDUCED BY INITIAL THYROID THERAPY

Edward E. Wallach, M.D., Glenn D. Lubash, M.D., Burton D. Cohen, M.D.
and
Albert L. Rubin, M.D., New York

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Hypothyroidism was treated with desiccated thyroid substance or a rapid acting preparation in nine patients aged 39 to 84 years. The results are presented in tabular form. The treatment was generally effective, but four patients developed cardiac complications which are described in greater detail. Two patients died. In one patient, a woman 69 years old, it appeared that dosages of thyroid substance sufficient to remedy the myxedema could not be given without danger to the enfeebled heart. Intolerance to thyroid medication was most marked in older patients with a history and physical findings of arteriosclerotic heart disease. By commencing with small doses, two patients were enabled to take larger doses which had previously caused angina pectoris and congestive heart failure. Treatment of hypothyroidism in patients of this type should begin with doses of as little as 7.5 mg. of desiccated thyroid daily, with increments of 7.5 mg. every two or three weeks until a dose of 30 mg. a day is reached.

Specific replacement therapy in hypothyroidism quite regularly reverses the disease process in gratifying fashion. Rarely, its use may be attended by development of congestive heart failure, angina pectoris, myocardial infarction, or dissecting aneurysm of the aorta.[1] In our experience during the past three years, four of nine hypothyroid patients developed cardiac complications early in the course of their treatment. This high incidence of adverse reaction stimulated us to review these cases for diagnostic factors in predicting the outcome of treatment. Previous studies [1b] have indicated that a history of hypertension, electrocardiographic abnormalities, or obvious evidence of arteriosclerosis is of little help in predicting complications.

In the review of these cases particular attention was directed to duration of symptoms, severity of hypothyroidism on the basis of clinical and laboratory studies, thyroid preparation and initial dosage schedule, and previous evidence of cardiac abnormalities. Case reports of the four patients in whom complications developed follow.

Report of Cases

CASE 1.—A 72-year-old woman had complained of tinnitus, loss of hearing, and cold skin. She denied cardiac symptoms. On physical examination, her skin was dry and her movements sluggish. The thyroid gland was not enlarged on palpation. Her heart was within normal limits.

The protein-bound iodine level was 2 mcg. %, the 24-hour radioactive iodine uptake 16%, the basal metabolic rate (BMR) −29%, and the total cholesterol level 348 mg. %. An electrocardiogram (EKG) revealed ST-T wave abnormalities

From the Cardio-Renal Laboratory, Second (Cornell) Medical Division, Bellevue Hospital, and the Department of Medicine, Cornell University Medical College. Dr. Lubash is a Research Fellow, New York Heart Association, 1957-1958. Dr. Rubin is an Established Investigator, American Heart Association.

suggestive of myocardial disease. Chest x-ray revealed calcification in the aortic arch and changes consistent with left ventricular enlargement (see figure). Cholecystography revealed cholelithiasis.

Treatment for hypothyroidism was begun with 15 mg. of desiccated thyroid a day and stopped after three days when the patient had chest pain and ST depression (ischemia) on EKG. Treatment was resumed with 7.5 mg. a day, but because of recurrent angina pectoris it was difficult to raise the dose. With very gradual increments of thyroid, a dosage of 45 mg. a day was achieved. At this level of replacement therapy the patient experienced pulmonary edema, which proved responsive to therapy.

She was eventually discharged to the Home Care Program on a regimen of 45 mg. a day, with minimal clinical improvement and no significant change in laboratory values. She was readmitted one year later for gallbladder surgery in the hope that removal of her gallstones might alleviate the angina. During the operation, however, she went into shock and died several hours later. Permission for postmortem examination was not granted.

With reduction in thyroid dosage, salt restriction, digitalis therapy, and administration of mercurial diuretics, the patient's signs and symptoms of congestive heart failure disappeared. Subsequently, the dosage of thyroid was more gradually raised without untoward effect. She was discharged to the Home Care Program on a regimen of 90 mg. of thyroid a day and showed moderate improvement.

CASE 3.—An 82-year-old woman had had a thyroidectomy performed for thyroiditis nine years prior to admission. Treatment with 60 mg. of desiccated thyroid daily was begun in the postoperative period and was continued until two years prior to admission. At that time, although the EKG failed to show conclusive changes, she was thought to have a myocardial infarction on clinical grounds. Atrial fibrillation was present. Because of mild symptoms of congestive heart failure, digitalis therapy was begun and mercurial diuretics were used in the ensuing two years.

For several months prior to her final admission, the patient complained of progressive weakness, chilliness, dry hair, hoarseness, and constipation. On physical examination the

Significant Clinical and Laboratory

				Laboratory Values			Cardiac	
Case	Age, Yr.	Sex	Duration of Disease	BMR, %	24-Hr. Radioactive Iodine Uptake	Protein-Bound Iodine Level, Mcg.	Cholesterol Level, Mg. %	History	Blood Pressure, Mm. Hg	Physical
1.....	72	F	Unknown	−29	16.0	2.0	348	Negative	115/80	Negative
2.....	63	F	4 mo.	−18	8.5	2.2	234	Negative	130/80	Negative
3.....	84	F	Several months	−36	9.0	1.5	730	? myocardial infarct; digitalis therapy	120/70	Irregular rhythm, enlarged heart, apical systolic murmur
4.....	69	F	1 yr.	−25	1.3*	0.6	348	Angina pectoris; digitalis therapy	130/80	Apical systolic murmur
5.....	64	F	5 yr.	−30	6.0	...	331	Hypertension	200/100	Basal systolic murmur
6.....	66	F	10-12 yr.	−7	5.0	...	298	Dyspnea on exertion, ankle edema	120/80	Negative
7.....	39	M	Unknown	−20	20.0†	3.4	200	Negative	120/80	Apical systolic murmur
8.....	42	M	6 mo.	−43	6.0	2.0	302	Acute rheumatic fever, at age 11	80/60	Enlarged heart
9‡.....	69	F	6 mo.	−6	...	...	332	Dyspnea on exertion, ankle edema	125/80	Negative

* NSR=normal sinus rhythm; VPC=premature ventricular contractions.
† 48-hour radioactive iodine uptake.
‡ Clinically myxedematous, uncooperative, pretreatment studies incomplete.

CASE 2.—A 63-year-old woman was admitted to the hospital because of a urinary tract infection. She complained of constipation for many years and hoarse voice for four months. She denied cardiac symptoms. Her skin was dry and had a yellow tint. Her hair was coarse. The thyroid gland was not enlarged, and cardiac findings were normal on physical examination.

The protein-bound iodine level was 2.2 mcg. %, the 24-hour radioactive iodine uptake 8.5%, the BMR −18%, and the cholesterol value 234 mg.%. An electrocardiogram was within normal limits. Chest x-ray revealed calcification in the aortic arch and a slight increase in the transverse diameter of the heart.

Treatment with desiccated thyroid was begun at a dose of 15 mg. a day, increased to 30 mg. after four days, and to 60 mg. after another four days. Two weeks from the start of the treatment, the patient was noted to have shortness of breath and peripheral edema. Venous pressure was 145 mm. of sodium chloride solution, and the circulation time (arm to tongue) was 22 seconds.

thyroid gland was not palpable. The heart was enlarged to the left anterior axillary line and the rhythm was irregular. There was a harsh systolic murmur at the apex. A trace of pretibial edema was present bilaterally.

The protein-bound iodine level was 1.5 mcg.%, the 24-hour radioactive iodine uptake 9%, the BMR −36%, and the total cholesterol level 730 mg.%. An electrocardiogram confirmed the presence of atrial fibrillation. There were ST-T wave abnormalities suggestive of myocardial disease. A chest x-ray revealed cardiac enlargement in all chambers and calcification in the aortic arch.

Treatment with 5 mcg. of triiodothyronine a day was begun. Four days later the dose was raised to 10 mcg. and after several more days it was increased to 15 mcg. Over this period, the patient's signs and symptoms of congestive heart failure increased markedly and became refractory to treatment. In spite of reduction in dosage of triiodothyronine and rigorous cardiac therapy, she died in congestive heart failure. Permission for postmortem examination was not obtained.

Case 4.—A 69-year-old woman had a history of hoarseness, partial baldness, coarse hair, anorexia, and intolerance to cold weather for one year. In addition, she had noted intermittent ankle edema and symptoms of angina pectoris during this time. Physical examination revealed far-advanced myxedema. The thyroid gland was not enlarged to palpation, hearing was decreased on gross testing, and ankle reflexes could not be elicited. Cardiac abnormalities were not noted. The protein-bound iodine level was 0.6 mcg.%, the 48-hour radioactive iodine uptake 1.3%, the BMR −25%, and the cholesterol value 348 mg.%. The EKG showed T-wave abnormalities suggestive of myocardial disease. Chest x-ray revealed calcification in the aortic arch.

Treatment with 15 mg. of desiccated thyroid a day was begun. One week later the patient had an anterior myocardial infarction and thyroid medication was discontinued. The patient then refused to eat and became increasingly lethargic and apathetic. This was attributed to progression of the myxedema. She died one month after admission.

Postmortem examination confirmed the presence of a recent anterior myocardial infarction, secondary to a thrombosis of the anterior descending branch of the left coronary artery. In addition, generalized arteriosclerosis and atherosclerosis of the aorta with medial calcification were noted. The thyroid gland was atrophic and fibrotic.

The microscopic description of the aorta and myocardium is of interest. The wall of the aorta was thickened with atheromatous plaques consisting of foam cells and cholesterol crystal clefts. The media revealed interstitial collections of basophilic mucoid material and small ovoid cyst-like spaces containing similar material. The myocardial fibers appeared enlarged and in several areas the myofibrils had disappeared, leaving a collapsed collagenous stroma. In some places there was an increase in interstitial connective tissue.

Data in Nine Patients with Hypothyroidism

EKG*	Radiology	Treatment	Result
NSR, ST-T wave abnormalities	Left ventricular hypertrophy; calcification in aortic arch	See case report	Angina, died after operation
NSR, normal	Increase in transverse diameter of heart; calcification in aortic arch	See case report	Congestive heart failure, living
Atrial fibrillation; ST-T wave abnormalities; low voltage limb leads	Enlargement of all cardiac chambers; calcification in aortic arch	See case report	Congestive heart failure, died
NSR, T wave abnormalities	Left ventricular hypertrophy; calcification in aortic arch	See case report	Myocardial infarct, died
NSR, ST-T wave abnormalities, suggestive of left ventricular hypertrophy	Left ventricular hypertrophy; dilated ascending aorta	30-60 mg. of desiccated thyroid stopped and resumed on several occasions	No complications, living
NSR, T wave abnormalities	Left ventricular hypertrophy	90 mg. of desiccated thyroid for 10-12 yr.	No complications, living
Sinus tachycardia, normal	Normal	15 mg. of desiccated thyroid/day, raised after several weeks; 60 mg. at present	No complications, living
Sinus bradycardia 1st degree heart block, intraventricular heart block, low voltage limb leads	Left and right ventricular hypertrophy	7.5 mg. of desiccated thyroid/day for 7 days; 15 mg. for 7 days; 30 mg. for 30 days; then 60 mg.; present dose 120 mg./day	No complications, living
Sinus tachycardia with rare VPC, ST-T wave abnormalities	Increase in transverse cardiac diameter	Triiodothyronine, 12.5 mcg./day; 4 days later ? thyroid storm, then desiccated thyroid, 7.5 mg. for 3 weeks; 7.5 and 15 mg. on alternate days for 2 weeks; then 15 mg./day	Psychotic, in state hospital

Comment

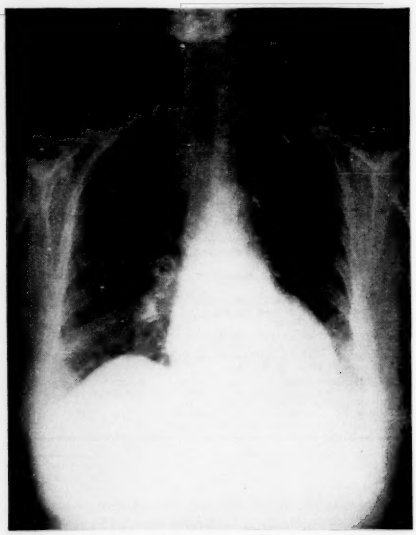
It should be noted that the cardiac complications seemed related to initial vigorous treatment rather than total dosage. In the two patients who survived such complication, reduction in dosage and then more gradual increments were well tolerated. The final dose was larger than that at which cardiac symptoms were first manifest. There was no striking difference in cholesterol values between those patients who developed cardiac complications and those who did not. The hypothyroidism was similar in duration and severity in all patients except the patient in case 4 who had far-advanced myxedema. The predominance of females in both groups reflects the sex incidence of hypothyroidism. The table summarizes the significant features in all nine patients.

In three respects the groups differed. Those who developed cardiac complications were, in general, older than the other group, with a mean age of 72 as compared with 56 years. The cardiac history in two of these patients indicated the presence of arteriosclerotic heart disease. In addition, calcification in the aortic arch was only present radiographically in the patients who later went on to develop complications. The latter finding is nonspecific and may be expected in a significant percentage of any group of patients over the age of 50. It implies arteriosclerosis elsewhere and suggests its presence in the coronary arteries. This correlation was confirmed by postmortem studies in case 4 in which generalized arteriosclerosis, coronary arteriosclerosis, and medial calcification of the aortic arch were noted.

There has been much interest in the relationship between hypothyroidism and arteriosclerosis.[2] The hypercholesteremia of thyroid insufficiency may be important in this regard. The role of concomitant

hypertension in the production of arteriosclerosis in hypothyroid patients has also been implicated.[3]

The hypothyroid patient often presents a precarious cardiac problem in other respects. Classic clinical myxedema, in which there are right-sided and left-sided dilatation, feeble cardiac pulsations, usually associated with abnormalities of conduction and low voltage on the EKG, and definite reduction in cardiac size after administration of thyroid extract, is relatively uncommon. However, the heart in hypothyroidism is frequently enlarged and heart failure may be imminent or present.[4] Grossly, there may be cardiomegaly and atheromatous changes in the coronary arteries. Pericardial effusion may be present more often than suspected.[5] Histologically, the muscle fibers may be swollen and vacuolated with loss of striation.[6]



Chest x-ray (case 1) showing calcification in aortic arch. Cardiac contour suggests ventricular hypertrophy.

In patients with hypothyroidism an increase in heart size of this nature is often tolerated, partially because of concomitant reduction in total body metabolism. The circulation of hypothyroid patients may undergo profound change. The heart rate and cardiac output decrease; the velocity of the blood flow is retarded; and arteriovenous oxygen difference increases.[7] The converse is true in patients with thyrotoxicosis or with hypothyroidism under treatment. Increased tissue respiration of cardiac muscle has been demonstrated in thyrotoxic animals [8] and humans.[9] With thyroid therapy, reduction in heart size is a gradual process, during which signs and symptoms of angina pectoris or myocardial failure may be precipitated.[10] Initial overtreatment with thyroid preparations in hypothyroid patients with possible heart disease may cause an enlarged heart to function above its physiological capacity. It may be postulated, therefore, that metabolic demands precede cardiac improvement. On the other hand, cautious treatment may often relieve the symptoms of congestive heart failure [4] or coronary artery disease.[11] Increased cardiac function is a prerequisite to the increase in tissue demands for the achievement of a stable thyroid-cardiac relationship.

In 1925, Christian [12] stressed the necessity for small initial doses and gradual increments in thyroid therapy, particularly in the older age group. With the recent introduction of rapidly acting thyroid preparations, this note of caution needs reemphasis. Particular application may be found in those patients with signs of arteriosclerosis.

In patients with possible heart disease it seems reasonable to begin treatment with a dose as low as 7.5 mg. of desiccated thyroid daily, with increments of 7.5 mg. every two to three weeks until a dose of 30 mg. a day is reached. Then larger increments may be used until the achievement of a euthyroid state. The slightest indication of cardiac difficulty should prompt a reduction in dosage schedule.

Summary

Specific replacement therapy in hypothyroidism often gives rise to cardiac complications. Four case reports of patients in whom such complications developed during thyroid treatment were compared to a group of five patients in whom treatment caused no difficulty. The complications seemed related to initial vigorous treatment rather than total thyroid dosage. Arteriosclerotic heart disease increases the risk of such treatment. Its presence, particularly in an older age group, may be implied by evidence of arteriosclerosis in other sites.

In hypothyroidism, anatomic changes in the heart may occur. They may be tolerated due to concomitant circulatory changes and reduction in total body demands. Thyroid therapy reverses these changes and may cause an enlarged heart to function above its physiological capacity. For these reasons, therapy in patients with possible heart disease should be instituted with low doses and gradual increments.

First Avenue and 26th Street (16) (Dr. Rubin).

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CLINICAL NOTES

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NERVE DEAFNESS ASSOCIATED WITH CONGENITAL SYPHILIS

REPORT OF A CASE TREATED WITH PREDNISONE AND PENICILLIN

Edmond A. Murphy, M.D., Richard D. Hahn, M.D.
and
Harriet L. Haskins, A.M., Baltimore

The nerve deafness of late congenital syphilis is usually an isolated neurological finding without concomitant evidence of neurosyphilis and without abnormalities in the cerebrospinal fluid. Keidel and Kemp [1] found 22 such cases among 230 patients with congenital syphilis. In contrast to most of the manifestations of syphilis, which respond to treponemicidal therapy and which can be attributed to the direct destructive effects of Treponema pallidum, the nerve deafness of late congenital syphilis does not respond to such therapy.[2] The scantiness of the postmortem material available permits no certain conclusions about the pathology or even the anatomic site of the lesion.

Interstitial keratitis and Clutton's joints (intermittent hydrarthrosis of the knees), both manifestations of late congenital syphilis, behave like hypersensitivity phenomena in that they are resistant to therapy with penicillin but responsive to that with corticosteroids. In speculating about the nature of late isolated nerve deafness in congenital syphilis, we have wondered whether it might behave in similar fashion. It was this possibility which induced us to treat with prednisone the patient here reported. The results were unexpected and, indeed, rather startling.

From the departments of medicine and otolaryngology, the Johns Hopkins University School of Medicine.

Report of a Case

A girl, born in 1938, first visited Johns Hopkins Hospital at the age of 9, complaining of a sore throat. Because the result of a routine serologic test for syphilis (STS) was positive (titer at 48 units), she was referred to the syphilis clinic. According to the mother, who had been inadequately treated for syphilis during the pregnancy with this child, the patient had shown no abnormalities in infancy. Findings on physical examination in April, 1947, were normal. The spinal fluid contained 18 cells per cubic millimeter and 53 mg. per 100 cc. of protein; the Wassermann reaction was positive down to 0.1 ml. Accordingly, she was treated with 1,522,500 units of penicillin in 125 doses every two hours by intramuscular injection and eight malarial paroxysms. Six months later, she returned with active interstitial keratitis in the left eye. At this time a further 60 million units of penicillin was administered over a period of seven and one-half days. The keratitis gradually cleared. She complained of some deafness at about this time. An otologist could find no abnormalities, but audiometry was not performed. One year later (November, 1948) she developed mild interstitial keratitis in the right eye, but this cleared without further antisyphilitic treatment.

In April, 1950, she again complained of poor hearing, this time confirmed by an otologist, who found mild "mixed deafness," more marked in the right ear. The following

September, she underwent adenoidectomy, but, despite this, in March, 1951, she had a temporary deterioration of hearing and was equipped with a hearing aid, which she learned to use successfully. Results of audiometric testing at this time are shown in figure 1. In the next five years, she was under periodic observation in the otolaryngology clinic.

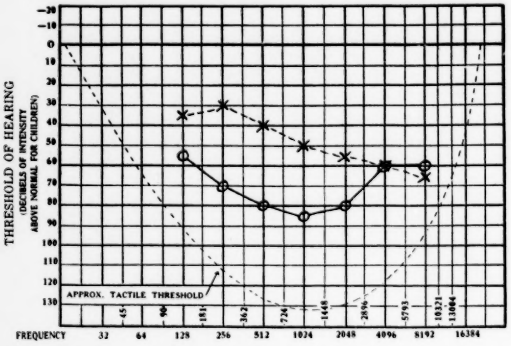

Fig. 1.—Results of audiometric testing six years prior to sudden deterioration in hearing. Speech reception threshold: 94 db. on right, 54 db. on left; discrimination score: could not do on right, 74% on left.

In 1953, she was given 1,800,000 units of penicillin for a sore throat and 1,200,000 units for pelvic inflammatory disease acquired shortly after the first of her many sexual exposures. At about this time, she was, for a short period, under psychiatric care for a transient behaviour disturbance.

On Sept. 7, 1956, she was seen in the syphilis clinic. On the previous day she had awakened with complete inability to hear and marked tinnitus. She had had no antecedent illness and there were no heralding symptoms. She had no dysphasia, nausea, vertigo, headache, or defect of balance. Detailed examination of the nervous system then and on four later occasions revealed no abnormalities other than those related to nerve deafness. Labyrinthine function was not tested. The spinal fluid was completely normal, and the titer of reagin in the blood, which, since 1953, had been 4 units or less, showed no rise then or subsequently. Audiometry (fig. 2) revealed that she could hear loud sounds, and there was very little deterioration in her hearing acuity for pure tones, whether this was assessed by conscious cooperation or by psychogalvanometric skin resistance tests. The speech awareness threshold, a measure of her ability to recognize that someone was speaking (indicated by the dotted line in figure 3), was almost unchanged, but no amount of loudness enabled her to identify individual words. In short, verbal communication with her was completely impossible. For this reason neither the speech-hearing threshold (the level of loudness at which one can identify 50% of spondaic words) nor the discrimination score (the percentage of one of a number of standard lists of 50 words which one can identify at a level of 30 db. above the speech awareness threshold) could be measured. Because hearing in the right ear had previously been very poor, it is not certain whether this acute deterioration involved both ears or only the left. The audiometric findings indicated that this episode was not, like her antecedent deafness, a simple abnormality in the end-organ but, rather, a complex neural deafness involving principally the interpretation of sound.[3]

It seemed impossible that this deafness could have been due directly to treponemal activity. Her congenital syphilis had been treated with nearly 65 million units of penicillin, and reinfection, a rarity in congenital syphilis,[4] could be excluded by lack of clinical evidence of early syphilis, failure of the STS titer in the blood to rise, and the presence of a normal spinal fluid.

Thirty-six hours after the onset of symptoms, therapy with prednisone was started. She received 30 mg. per day for two days and thereafter 20 mg. daily. As a precaution, 6 million units of penicillin was given in seven doses.

The results of treatment are outlined in diagrammatic form in figure 3. Improvement was prompt; verbal communication was possible by the 7th day, and by the 14th day she could understand most of what was said to her in a loud voice. On the 18th day she could tolerate audiometry, and thereafter there was continued improvement. From the 39th day onward, the dose of prednisone was gradually reduced until she was taking 5 mg. daily (95th day). At this point there was marked subjective deafness (audiometry showed it to be comparatively slight), and the previous heavy doses were resumed. In late December, 1956, without seeking advice she cut down her dose to 2.5 mg. daily. There were no ill-effects, but because of the risk of acute adrenal insufficiency full doses were once again employed. After this, progress was uneventful and the dose of prednisone was tapered cautiously until June 1, 1957, when it was stopped. An illustrative test result is shown in figure 4. She was seen several times subsequently, most recently in April,

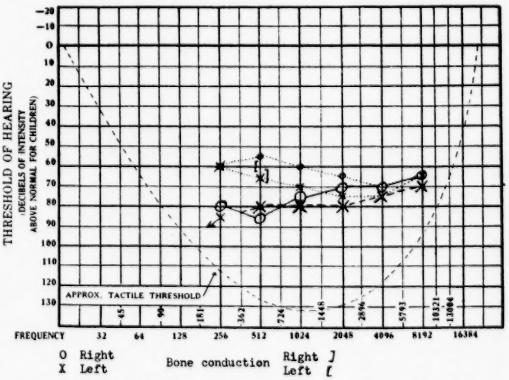

Fig. 2.—Results of audiometric testing four days after sudden deterioration in hearing. Dotted lines refer to hearing by bone conduction. There is little change in pure tone hearing. Neither speech reception threshold nor discrimination score could be obtained, except for awareness at 54 db. on left in speech reception.

1958, when audiometry revealed that her hearing was as good as it had been before the sudden deterioration on Sept. 6, 1956.

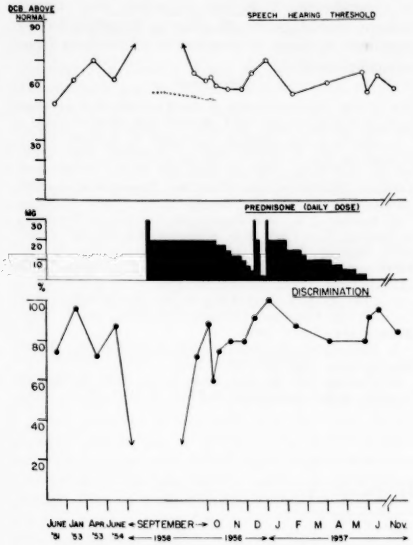

Fig. 3.—Interpretation of speech. Dotted line represents speech awareness threshold. At height of deafness it was not possible to perform tests of interpretative function. Progressive increase in loudness of testing sound produced pain before any words could be distinguished.

Comment

The validity of this case report is contingent on three facts: proof of congenital syphilis, proof of the etiology of the deafness, and proof of the therapeutic effect of prednisone. Of the first of these there can be no doubt. Her mother was known to have had inadequately treated syphilis during the pregnancy with this child, and the patient herself was observed to have interstitial keratitis and, at an early age, a positive STS result in her blood and spinal fluid. Of the second, there can be little doubt. Sudden severe exacerbation of nerve deafness when she was 18 years old, in the absence of other signs, spinal fluid changes, history of trauma or drug ingestion, or antecedent viral or bacterial infection, permits of no other ready explanation on an organic basis. Conversion hysteria can almost certainly be ruled out by the pattern of the audiometric findings and the rapid response to treatment without any form of psychotherapy. Moreover, Hallberg [5] found a psychological cause in only one of 178 consecutive cases of sudden deafness from all causes. It seems probable that there was no serious bias in the source of his material. Proof of the effectiveness of the prednisone is also reasonably certain. In our experience, in the extensive files of the syphilis clinic of the Johns Hopkins Hospital, and in the world literature, we have encountered no case with spontaneous improvement comparable to this, though it is clear that some fluctuation in the degree of deafness may occur from time to time in many cases. It seems most unlikely that penicillin was the responsible therapeutic agent. She had already received nearly 65 million units of penicillin before this severe exacerbation, and comparably dramatic effects from treponemicidal therapy of severe deafness in late congenital syphilis do not appear to have been observed previously. Moreover, long after the penicillin therapy had been stopped tapering of the dose of prednisone appears to have resulted in a mild relapse, which responded promptly to resumption of full dosage. Perlman and Leek [6] treated five of their series of patients with established nerve deafness in late congenital syphilis with ACTH and penicillin, with some improvement in three. None of their patients was seen after sudden loss of hearing. These writers thought that the ACTH, by reducing inflammation and fibrosis, enabled the penicillin more easily to reach treponemes, which they believed were still present.

Since the incidence and prevalence of congenital syphilis is decreasing, it is unlikely that any one

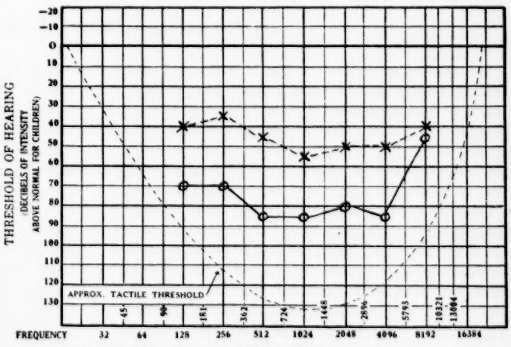

Fig. 4.—Results of audiometric testing 14 months after episode and 5 months after prednisone therapy had been stopped. Function had been restored to its previous level. Speech reception threshold: awareness at 74 db. on right, 54 db. on left; discrimination score: could not do on right, 84% on left.

observer will compile a large series of cases with sudden nerve deafness, due to this disease, in the acute phase. Steroid therapy has proved so effective in this case that we recommend that others who encounter such cases try its effect.

We have had no experience with the use of prednisone in chronic syphilitic nerve deafness or in chronic deafness from other causes, and we are in no position to express an opinion as to whether it would be of value. There is on record at the Johns Hopkins Hospital, however, a well-documented case of sudden partial perceptive deafness in a young woman immediately after a virus infection. It appears that prompt steroid therapy resulted in dramatic improvement in this case, but in sudden nerve deafness of nonsyphilitic origin spontaneous improvement is known to occur.

Summary

A girl with congenital syphilis received, between the ages of 9 and 15 years, several courses of therapy with penicillin, to a total of 65 million units. At the age of 18, without evidence of reinfection, she developed complex nerve deafness sudden in onset. She was treated with prednisone and penicillin with success. There is evidence that the improvement was not due to the penicillin or to coincidence. It is not suggested that steroid therapy would prove effective in long-established syphilitic deafness or chronic nerve deafness from any other cause.

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SPECIAL ARTICLE

COMMON SENSE APPROACH TO THE PROBLEM OF GENETIC HAZARD DUE TO DIAGNOSTIC RADIOLOGY

REPORT BASED IN PART ON STUDY OF EXPOSURES IN A SMALL AMERICAN INDUSTRIAL CITY

W. Daggett Norwood, M.D., Richland, Wash.

Accumulating evidence suggests that the genetic damage to the human gonads due to exposure to ionizing radiation is greater than previously thought. This, with the greater potential for exposure of whole populations in medicine, industry, and defense, has resulted in increasing concern over genetic injury to whole populations. Debates among scientists over the amount and effect of radiation due to fall-out from testing atomic weapons have made the American public more aware of the hazards of radiation. This is a healthy state of affairs, if perspective can be maintained on the part of both the medical profession and the public.

Considering the relative genetic hazards to whole populations from man-made radiation, we find that by far the largest contribution comes from diagnostic radiology. At the same time, the judicious use of diagnostic radiology is one of medicine's most important tools.

Much remains to be learned regarding the actual exposures being received and the genetic consequences. However, as discussed later, there is increasing evidence that any exposure of the gonads to radiation is harmful and should, and can, be greatly reduced by techniques and methods that are already available. The dangers from radiation have received so much publicity that an appreciable number of individuals have been frightened to the point of refusing very desirable roentgenologic examinations.[1]

This discussion will attempt to present a common sense approach in limiting exposure to the gonads without sacrificing the tremendous value of diagnostic x-rays. Somatic damage to individuals, while of great significance, is given little or no consideration in this discussion simply because this is an-

Manager, Health and Safety Operation, Hanford Atomic Products Operation, operated by General Electric Company for the Atomic Energy Commission.

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other subject. Suggestions are based on an evaluation of the genetically significant radiation dose from the diagnostic use of x-rays in a small American city,[2] as well as on preliminary national studies which have been made in the United States and abroad.[3]

Several geneticists[4] have sketched the background which has lead to the concern of this study. Briefly, realization that radiation increases the mutation rate dates back 30 years to Muller's experiments with fruit flies.[4c] Spencer and Stern,[5] using more than 50 million flies, showed that genetic damage was proportional to dosage in the important range of 25 to 50 r. Concern has been heightened by recent findings[4f] that exposure of mice to a given quantity of radiation increases the mutation rate by about 15 times as much as does an equal exposure of Drosophila, which had formerly served as the sole basis for inferring human risks.

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Quantitative Estimate of Genetic Damage

While there is general agreement that any radiation exposure is harmful from a genetic standpoint, it is not possible to say with any assurance how harmful. According to Crow,[4a] the spontaneous mutation rates in man, which have been measured, average 10 to 15 per million genes. In mice the average rate of x-ray-induced mutation is about one per million genes per 4 r.[4f] If human genes have the same response to x-ray exposure as do those of mice, 40 to 60 r would be required to double the present mutation rate.[4a] Both the National Academy of Science (NAS) and the British Medical Research Council have suggested 30 to 80 r as the range within which the doubling dose is likely to be.[3]

Consequence of Doubling Rate of Mutation.—One may reasonably ask, what is the consequence of doubling the present spontaneous rate of mutation? Two aspects must be considered: the effect on the immediate offspring and the effect on later descendants.

The British study[3b] estimates that only about 1% of mutant genes are dominant and cause damage in the next generation. From calculations based on theory, about 10% of germ cells at present carry a new mutation. Hence, doubling the mutation rate might lead to an increase of one in a thousand (0.1%) in the number of harmfully affected children in the next generation. In Richland, Wash., during the years 1953 to 1956, inclusive, newborn infants with obvious mental or physical defects, as indicated by the obstetric records, amounted to 0.65% of the births. However, the usual estimate is that about 2% of all babies have some observable genetic defect at birth, while a considerable number develop diseases or abnormalities in which hereditary constitution is a preponderant cause.[4a]

The consequence of one generation of parents exposed to 10 r in the United States, if we apply the above assumption, would be that with the present births of about 100 million per generation there would be 400,000 (10/50 by 2% by 100 million) babies with new severe genetic defects. These would be spread over many generations, with perhaps 10% (40,000 severe defects) occurring in the first generation.[4a] This would be an increase of some 1,300 severe defects (1 in 2,500 births) per year. The factor of uncertainty in this figure would be very high.

The British report estimates that the risk that a pair of parents will produce an imbecile or idiot, that is, a child with a severe mental defect, who survives is about 1 in 500. The increased proportional risk for parents in both of whom mutation rates have been doubled is about 3%. This means that the risk of having a child with severe mental defects who survives would be 1 in 485.[3b]

On the basis of experience with fruit flies, we would expect that the most frequent human mutations would not cause gross physical abnormalities but minor impairments of body functions leading to such factors as increased susceptibility to disease, decreased vigor and productivity, and shorter span of life.[4a] The National Academy of Science Genetics Committee[3a] reports that, roughly, one child in 20 would have an additional mutation if the whole population of the United States now received a genetically significant gonad x-ray dose of 10 r. The uncertainty of this estimate was said to be about a factor of 10, and the factor of uncertainty is even greater in trying to evaluate actual impact, in terms of disease and disability, of these mutations on subsequent generations.[4e]

It should be remembered that there are many factors other than radiation which cause genetic changes in laboratory animals, and presumably in man, such as temperature, oxygen tension, and various chemicals. Based on data from fruit flies and the fact that wearing of clothes increases male gonad temperature by 3 C, Ehrenberg and coworkers feel that wearing clothes may cause almost half of the present load of spontaneous mutations. They recommend the wearing of kilts as most important in reducing male gonad temperature and hence in decreasing mutations.

Aging due to Radiation

Studies suggest that mutational changes induced by radiation in the germ line materials of past generations may combine with the mutational changes induced by radiation in the soma of the present generation to influence the time of death.[7] Warren[8] reports a shorter life span for radiologists as compared with other physicians, while Lewis[9] has questioned the statistical validity of Warren's conclusions on the basis that age differences alone in the groups being compared would be sufficient to account for the difference in average length of

life. Braestrup [10] points out also that, in years past, radiologists using nonprotective equipment were exposed to radiation of the order of 100 r per year, while with present standards of protection the yearly dose is reduced to about 1 r per year.

Failla and McClement [7a] estimate a possible life shortening of one day per roentgen exposure, while the estimate of Jones [11] is higher. Such figures must be considered in light of some of Jones' other estimates of average loss of life span, such as loss of 18 years due to smoking two packages of cigarettes per day, 15 years due to being 67% overweight, and 15 years due to having highly elevated lipoprotein level.

Blair,[12] from a careful analysis of animal studies, has pointed out that radiation injury has two components: a reparable one and an irreparable one. Failla [7b] postulates that the irreparable component is the result of direct interference with the chemical processes of the cell at one or more links in the chain. Several authors feel that, in the absence of disease, ionization by radiation is one of many processes which may shorten the inherent life span determined by the genetic constitution inherited from the parents.[13] This is said to be due to an acceleration of the aging process as a result of deleterious somatic cell mutations. It is hoped that statistics from Hiroshima and Nagasaki may add to our knowledge in this field. At present, inferences are largely based on animal studies.

New Permissible Limits Emphasize Population Exposures

The genetic harm to a population due to radiation is roughly proportional to the total radiation received by the gonads between conception and reproduction. This is true irrespective of how or at what intensity the radiation is received or how it is distributed among the individuals of the population. Exposure of 100 young people to 1 r each has essentially the same effect on the germ pool as does exposure of one young person to 100 r. Taylor [14] has nicely traced the changes in knowledge and conditions leading to changes in recommendations of the National Committee on Radiation Protection (NCRP) [15] and the International Commission on Radiation Protection (ICRP) during the last 25 years as far as occupational exposure is concerned. At a meeting of the ICRP in April, 1956, the genetic problem was considered, and a figure of about 10 rem of man-made radiation was recommended as a reasonable average per capita dose to the age of 30 for the future for the total population. It has been decided by the NCRP, on the basis of present evidence, that the most important new limitation in industrial exposures should be one relative to gonadal exposure to individuals during the reproductive period. The NCRP report stated, "If we allow an accumulated dose, over fifty years, of about 250 rem up to age 70, this would amount to an average of about 5 rem/year. The new requirement will be that, at a given age of 18 or over, an individual may be allowed to accept a dose such that his total accumulation in rem will not be in excess of 5 times the number of years of age over 18. Thus, at any time, exposure must be less than 5 (N–18) rem where N represents the person's age. This automatically holds down exposure at the younger ages where it is most critical. It gives leeway at the older ages, where it is less critical."

The carefully operated industrial facility should have little difficulty in meeting these recommended limits. Even though enormous quantities of radioactive material were processed at the Hanford Atomic Product Operation during 1957, the average annual whole-body exposure to external radiation of individuals in the monitored areas was 0.30 rem per man-year. It is estimated that this is about the same as the gonad exposure. Annual chest x-rays constitute a part of the health inventory for all employees. In addition, regional roentgenograms are taken as needed in work placement or in handling occupational injuries. Such diagnostic procedures for employees resulted in an average annual gonad exposure of 0.03 rem per employee (1953-1956, inclusive), in addition to that which was received in the plant. Total employee annual exposure was 0.30 rem within the plant plus 0.03 rem from employee diagnostic procedures concerned with employee health maintenance. As a result of this study, a small bag lined with rubber lead sheet equivalent to about 1 mm. of lead is now being used to protect male gonads during diagnostic work involving the low part of the back, hip, pelvis, and low part of the abdomen, and this is expected to eliminate a great deal of the gonad exposure, since most of the procedures involving these areas are in male employees.

Lincoln and Gupton [16] estimated employees annual gonad exposures from diagnostic x-ray procedures both inside and outside the plant as 0.016 r at the Oak Ridge National Laboratories.

If such conditions are maintained as atomic industry expands, the contribution of gonad exposure in industry spread over the general population would be very small compared to that of diagnostic exposure. Even assuming there were a million radiation workers (0.6% of the present population of 160 million), this would only amount to 0.06 rem (0.33 r by 30 by 0.006) for a 30-year period, if exposures in other installations are similar to those at Hanford.

Critical Evaluation of Diagnostic X-ray Procedures

A number of studies are in progress to try to determine the genetically significant radiation dose which is being received by the people of various countries through the diagnostic use of x-rays.[17]

This is compared with the natural contribution as well as other sources of man-made radiation. The report of the British Medical Research Council,[3b] covering England and Wales, and the preliminary report of the American National Academy of Sciences, National Research Council,[3a] are notable examples of such studies.

United States Study.—The preliminary report by Laughlin and Pullman [18] for the National Academy of Science states that the genetically significant dose will be that which is delivered to the gonads of the patients under 30 years of age. This carries the average parent up to the mid-productive period and so represents approximately the average annual genetic dose. A more accurate method for taking into account the genetic effects is to weight the gonad dose each person receives up to a given

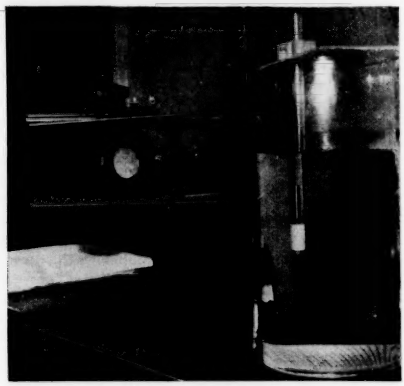

Fig. 1.—Water-filled Lucite container used as phantom to simulate tissue of female torso. Adjustable meter is located at approximate position of gonads and registers dose during various roentgenologic procedures.

age by the probable number of children to be born subsequently to the person. This procedure was used first in the Australian study [17b] and later in the British study [17i] and is used in the study in Richland, Wash.[2] The NAS [18] estimate of the average gonad dose which Americans receive from diagnostic procedures during the first 30 years of life is 4.1 r and for x-ray and radioisotope therapy, 0.5 r. It is further estimated that the exposure would be reduced to 1.5 r for diagnostic exposures if computations were based on the lowest gonadal doses reported. The NAS estimate, therefore, is that gonad exposure from diagnostic radiation is a little greater than that from natural radiation (3.1 rem).

Richland, Wash., Study.—Richland, Wash., is the resident community for the employees of the Hanford Atomic Products Operation, where plutonium is manufactured by the General Electric Company for the Atomic Energy Commission. All x-ray diagnostic procedures performed in Richland (population 26,740) for a four-year period, 1953-1956, inclusive, have been tabulated. These are subdivided according to sex, part of body examined, and age group (fetus, 0-1, 2-9, 10-15, 16-20, 21-25, 26-30, 31-35, 36-40, 41-45, and 46 years and over). About 85,000 examinations were tabulated. Most of the x-rays were taken in the 109-bed, privately operated Kadlec Methodist Hospital, under the direction of a specialist in radiology. About 10% of the total exposure came from the offices of a private radiologist, a general physician, a chiropodist, and a facility for dental x-rays and from one chest survey by a mobile unit. In diagnostic procedures, where exposure to the direct rays is high, measurements were made to determine the gonad dose. Measurements were also made of gonad dose and lung dose during chest x-rays, because of the frequent use of this examination. Measurements were made on the hospital machines, since 90% of gonad exposures originated here. Measurements on the private radiologist's machine showed exposures about 40% lower than those of the hospital machine. The hospital measurements were used in calculating all of the exposures, as the private radiologist's machine was tested after the results had been summarized and the degree of accuracy of results does not warrant corrections which would modify the final result by only about 2%.

For the measurement of the dose to the female gonads, a water-filled Lucite (polymerized methyl methacrylate) phantom, 12 in. in diameter and 24 in. high, was used (fig. 1). This simulates human tissue with reasonable accuracy. A 5-r Victoreen roentgen meter chamber was covered by a rubber balloon and immersed in the water at measured positions. It was assumed that the ovaries are located 12 cm. from the anterior surface and 8 cm. from the posterior surface. The ovaries are usually 4 to 5 cm. from the mid-line, but instead of measuring the dose for right and left side an average depth of 12 cm. for lateral exposures was assumed. The water phantom was placed in the patient's position, and simulated x-ray exposures were made of the anatomic part to be examined.

For the male gonad measurements, a Masonite phantom with rudimentary legs was used (fig. 2). The spermatic tissue is distributed throughout the testis to a maximum depth of 12 to 20 mm. and to a minimum of 1 to 2 mm. It was assumed that for direct anteroposterior exposures the average depth was 7 mm., which makes a small allowance for shielding by nearby tissues. The dosimeter was covered by ¼-in. of Lucite to simulate this depth of tissue.

Table 1 gives the gonad dose for several common examinations for males and females, annually for an average year, obtained by dividing the four-year exposure by four. It may be seen from this

Fig. 2.—Laminated Masonite form used to simulate male torso in determining gonad doses. Lead-lined pouch for protection of male gonads during diagnostic procedures is shown with meter in place to measure degree of protection afforded.

table that the examinations of the low part of the back and abdomen and of the pelvis and hips constituted only 6% of the total number of examinations but contributed 77% of the total dose to the gonads. This is because the gonads are exposed to the direct x-ray beam during these examinations.

The genetically significant radiation has been calculated by factoring in the risk of subsequent parenthood for the diagnostic exposures and for exposures from natural radiation. These calculations and the technical details of the study are reported in another paper.[2] The genetically significant exposure from diagnostic radiation is then compared with the genetically significant natural radiation for Richland, Wash.

$$\frac{\text{Annual genetically significant diagnostic radiation per person}}{\text{Annual genetically significant natural radiation per person}} = \frac{91 \text{ mr}}{204 \text{ mr}} = 0.45$$

If we assume that the genetically significant radiation is that received annually by the population of Richland during the first 30 years of life, we have this result:

$$\frac{\text{Diagnostic radiation per person per year (first 30 years of life)}}{\text{Natural radiation per person per year (first 30 years of life)}} = \frac{46 \text{ mr}}{104 \text{ mr}} = 0.44$$

When these two results are compared, the ratio of diagnostic radiation exposure to natural radiation exposure differs by a factor of $0.44 \div 0.45 = 0.98$ or by 2%. For a study of this type this is a negligible difference, so it is felt that the laborious, exacting method of factoring in the risk of pregnancy may be omitted in favor of the more simple method.

For comparison with the American figure, the Richland figure for 30-year exposure without factoring in the risk of parenthood is 46 mr $\times$ 30 = 1,380 mr = 1.4 r. It is therefore about one-third the estimated average of American exposure.[17f] From table 2 the relative importance of the various man-made sources of gonad exposure may be readily compared with the natural radiation and with each other.

TABLE 1.—*Measured Gonad Exposures During Some Common Roentgenographic Examinations at Richland, Wash., 1953-1956 (One-Year Average from Four-Year Period)*

	Gonad Exposure Per Examination, Mr*			Total Annual Exposures, Mr	% of All Examinations	% Contribution to Total Exposure
	Male	Female	Fetus			
Chest photofluorogram, 4 × 5	6.7	3.0	3.0	21,093.0	20.5	1.07
Chest roentgenogram, 14 × 17	0.6	3.3	3.3	14,932.0	26.8	0.76
Skull or sinus†	1.0	0.25	0.25	315.0	2.2	0.02
Finger, wrist, or elbow†	0.3	0.06	0.06	207.0	4.2	0.01
Knee or femur†	2.5	1.25	1.25	894.0	2.0	0.05
Dental, full†	15.0	2.5	...	7,592.0	13.8	0.39
Lumbar spine	128.0	1,320.0	1,320.0	143,726.0	1.3	7.28
Lumbosacral spine	82.0	2,800.0	2,800.0	136,238.0	0.08	6.93
Sacroiliac spine	3,000.0	1,950.0	1,950.0	75,863.0	0.13	3.86
Pelvis	2,600.0	1,300.0	1,300.0	152,450.0	6% 0.39 77%	7.75
Pelvimetry	...	2,160.0	2,160.0	61,020.0	0.13	3.10
Hips	3,250.0	1,625.0	1,625.0	221,031.0	0.46	11.24
Barium enema, GI fluoroscopy	360.0	1,680.0	1,680.0	732,200.0	3.4	37.23
Mass miniature radiography†	1.5	1.5	...	3,198.0	9.98	0.16

* Individual measurements for adults.
† Taken from literature—others measured.

TABLE 2.—*Estimate of Genetically Significant Gonad Exposure from Natural Sources and from Man-made Radiation in Richland, Wash., and United States as a Whole*

Radiation Source of Exposure	Rem per Person, First 30 Years		% of Total	
	Richland	U.S.*	Richland	U.S.*
Natural[17f]	3.1	3.1	60.0	39.4
Diagnostic[19]	1.4	4.1	27.2	52.2
Therapeutic[17f]	0.5†	0.5	9.7	6.3
Fall-out[20]	0.1‡	0.1‡	1.9	1.3
Occupational	0.06§	0.06§	1.2	0.8
Total	5.16	7.86	100.0	100.0

* Data from National Academy of Science.
† Figures from National Academy of Science, since no radiation therapy is given in Richland and citizens must go elsewhere for this service.
‡ If weapons tests are continued at the same average rate as during the period 1951-1955.
§ Assumption is made that during next 30 years 0.6% of U. S. population will be employed in radiation work and will receive gonad exposures as result of this work, comparable to those of average monitored atomic worker at Hanford Operation, and that this is distributed over the total U. S. population.

Subsequent to the period covered in the study, the hospital has increased the effectiveness of the filters in the primary beam from 1 mm. to 2 mm. equivalent of aluminum, has secured an adjustable diaphragm permitting the use of rectangular fields no larger than necessary to cover the film, has

obtained x-ray film which is about 40% more sensitive, and is starting a program for protecting the gonads of males with lead rubber sheet (lead equivalent about 1 mm.) when direct-beam exposures are anticipated.[21] The highest voltage that will permit a satisfactory film contrast is being used.[22] A 1-mm. lead sheet for shielding the testes from the direct beam reduced the dose by factors of 40 to 100 at kilovoltage varying from 74 to 100. To accomplish this, a device (fig. 2) consisting of a small pouch lined with lead sheet, about 1 mm. thick, or equivalent lead rubber and held in place around the male genitalia by suspensory type straps was improvised. A conservative estimate is that these changes will cut the Richland gonad exposure in half.

Because actual figures are used for distribution by age, sex, and anatomic part surveyed and because dosage measurements and estimates are for the actual machine used in most cases, many of the factors which decreased statistical validity in the national studies have been eliminated. However, it must be remembered that dosage is still an estimate, as gonads of both mother and fetus move during pregnancy and time exposure in fluoroscopy must be estimated. In a few procedures, such as those involving the lumbar spine, a small change in the angulation of the x-ray beam may place the gonads just inside or outside the direct beam and change the exposure by a factor of 20 or more.[23] From a national standpoint, the Richland study has the disadvantage that it represents only Richland conditions and is not representative of practices throughout the United States. It is hoped, therefore, that many such studies will be made in order that these may be used by the NAS, or other study groups, to better evaluate the national problem. Such studies will also serve to detect inadequate equipment and local practices and will result in a degree of improvement which may be even more remarkable than that expected in Richland.

Employee Exposure due to Diagnostic Radiology.—The practice of routinely taking x-rays of the backs of all male applicants for employment is an example of the kind of procedure that would result in very appreciable gonad exposures unless the gonads were protected by shielding. Periodic x-rays of the chest add little to gonad exposure, and even this minute exposure could be eliminated by a simple curtain type of shielding if it were considered necessary.[24] They do add to local regional exposure, however. In the phantom study, with use of 14-by-17-in. film, the lung dose was 10 mr per film, while it was 400 mr when the photofluoroscopic technique and a 4-by-5-in. film were used. For this reason, 14-by-17-in. conventional films are used for annual chest x-rays on employees at the Hanford Operation who have potential exposure at work. The male gonad dose during photofluorography (4-by-5-in. film) was 6.7 mr, while it was 0.6 during roentgenography of the chest (14-by-17-in. film). For women, the gonad doses were 3 mr and 3.3 mr respectively.

Considerations in Reducing Exposure in Diagnostic Work

Following the recommendations in Handbook 60[25] on x-ray protection, prepared by the NCRP, will aid greatly in reducing exposure to patients, technicians, and physicians. The most important steps are accurate limiting (coning) and filtering of the primary x-ray beam; use of the most sensitive combination of film, screens, developing chemicals, and temperature; use of the highest voltage that will permit a satisfactory film contrast; and reduction to a minimum of the number of films and screening time of each examination.

Electroluminescense, a new kind of light useful for image intensification, may reduce radiation exposure in fluoroscopy by a factor of 30, when equipment becomes available. Gonads should be protected, when possible, by appropriate screening devices. A qualified expert should assist in planning the structural shielding requirements of any new installation or changes in old installations. He should make a protection survey after completion and at a later date to determine if safety requirements are being met under operating conditions. The expert should also be consulted on the establishment of a monitoring system to determine exposures for each individual for whom there is any reasonable possibility of receiving more than one-fourth the maximum permissible weekly dose.

The various studies, including the Richland, Wash., study, indicate that the greatest care should be taken to minimize gonad exposure during procedures involving the low part of the back and abdomen and the thigh and pelvis, and this becomes even more important during pregnancy.[26] Special care should be taken during examinations of any anatomic portion of infants or small children to avoid, if at all possible, catching the gonads in the primary beam. The patient is so small that the gonads are closer to every area that may be examined. Fluoroscopic examinations of well babies on routine periodic visits to pediatricians should be discouraged or prohibited, according to Stone,[27] because they almost routinely include the gonads in the direct beam and frequently the physician does not know the rate of exposure of the machine. Buschke and Parker,[28] in 1942, and Sonnenblick[29] in 1952, found fluoroscopes with exposure rates varying from 2 to 200 r per minute. If a pelvimetry examination is necessary, in the opinion of the obstetrician, it should be done before pregnancy or late in pregnancy when the fetus is beyond the period of organogenesis and when a comparison can be made of fetal head size to pelvic size.[27]

It seems trite to repeat that x-ray examinations should be limited by careful professional judgment to those required for the health needs of the patient. In summarizing a recent symposium on radiation hazards at the annual meeting of the American Roentgen Ray Society, Chamberlain [30] said, "The present exposure to radiation for medical and dental purposes can be appreciably reduced by techniques and methods that are already available. These are economically feasible, and largely require only interest, education, and the use of well established information and instruments." Interest and education have apparently reached a high point for well-trained radiologists but need to be augmented for the vast number of others who use roentgen ray equipment.

Moeller and associates [31] estimated, in 1953, that there were 125,000 roentgen ray machines in the United States. One-half of these belong to dentists and hospitals, the other half to doctors, osteopaths, chiropodists, and chiropractors. Better understanding is needed on the part of some members of this group in order that they may improve installations and techniques and enhance their judgment in ordering x-rays, which are in the best interest of the patient, after carefully weighing all factors. We should also take the time necessary to explain the pros and cons to the many individuals who have been so alarmed by the frequent discussions which have emphasized the hazards of radiation without explaining the benefits derived. Many do not realize the difference between genetic hazards and somatic hazards or between local and whole-body exposure.

Conclusions

It is hoped that these remarks may have resulted in some improvement in perspective in evaluating the importance of the problem of radiation damage, particularly from a genetic standpoint. A combination of circumstances has tended to emphasize the problem of genetic damage to populations through exposure to radiation. Increasing use of radiation in medicine, industry, and defense has come at a time when genetic experimental evidence indicates that there is no radiation exposure threshold for induction of mutations and that the mutation rate per roentgen exposure is higher than it was thought to be. This has resulted in a need to evaluate genetic hazards to whole populations as well as somatic hazards to individuals. British and American groups have suggested 30 to 80 r as the range within which the dose for doubling the natural mutation rate is likely to be, and the National Committee on Radiation Protection and the National Academy of Sciences (NAS) have recommended a tentative figure of about 10 rem of genetically significant man-made radiation as a reasonable average per capita dose for the future. If human genes have the same response to x-ray exposure as do those of mice, this would be expected to increase the mutation rate by about 20% over a period of many generations.

The NAS estimates the average genetically significant exposure to the American population from diagnostic radiology to be about 4.1 r. A local study in Richland, Wash., just completed, estimated the genetically significant exposure from diagnostic radiology there to be 1.4 r. Improved equipment and techniques instituted after the study are expected to cut this exposure in half with little effort. The genetically significant exposure from natural radiation is considered to be about 3.1 r.[17g]

Local studies have much higher validity for the local area and stimulate local improvements. Many such studies with geographical and installation diversity are needed to give a true picture of the problem at the national level. A plea is made that we each take the trouble to differentiate between the genetic importance of those examinations which involve the gonads in the direct radiation beam, such as the low part of the back and abdomen and the pelvis, and the examinations in which genetic exposure is relatively unimportant, such as those involving the chest, head, and extremities,[v] which make up the vast majority of all x-ray procedures. Simple changes in equipment and techniques, including protection of the male gonads with a lead-lined pouch, may drastically reduce such exposure. Estimates of genetic damage from radiation are based almost strictly on experiments with fruit flies and mice. This must be weighed against the great lengthening in life—19 years during the present century—to which diagnostic radiology has been an important contributor.

If we consider all these points, perhaps we may have our pie and eat it too.

1937 Harris Ave.

Mr. C. M. Unruh made many of the measurements of gonad doses.

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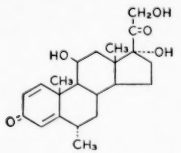
COUNCIL ON DRUGS

NEW AND NONOFFICIAL DRUGS

Monographs and supplemental statements on drugs described here and in subsequent editions of New and Nonofficial Drugs are based on the evaluation of available scientific data and reports of investigations.

H. D. KAUTZ, M.D., *Secretary.*

Methylprednisolone. — 6α-Methylprednisolone.— The structural formula of methylprednisolone may be represented as follows:



Actions and Uses.—Methylprednisolone shares the actions and uses of prednisolone, to which it is identical chemically except for the addition of a methyl group at the 6-alpha position. The methyl derivative has an anti-inflammatory potency slightly greater than that of an equal amount of prednisolone; at the same time, it induces somewhat less retention of sodium and water. It is of value for the management of those rheumatic, allergic, dermatological, and ocular disorders known to be responsive to anti-inflammatory glucocorticoids. While not as yet substantiated clinically, it is anticipated that methylprednisolone will ultimately have a place akin to that of other corticosteroids in the temporary control of acute leukemia and other mesenchymal neoplasms, as well as in certain diseases such as nephrosis or ulcerative colitis. The drug is probably not as effective as cortisone or hydrocortisone for the management of acute adrenocortical insufficiency, since it does not exert significant mineralocorticoid activity at the usual doses.

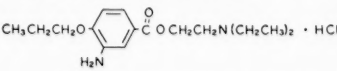
Although methylprednisolone induces somewhat less water and sodium retention than prednisolone, it is capable of producing the same untoward reactions. Peptic ulcer appears to develop rarely in patients receiving methylprednisolone. However, further clinical experience will be necessary to evaluate accurately the incidence of this undesirable side-effect. Hence, all the precautions and contraindications pertinent to the use of prednisolone are applicable to methylprednisolone. (See the general statement on glucocorticoids in New and Nonofficial Drugs.)

Dosage.—Methylprednisolone is administered orally. Dosage should be individualized according to severity of symptoms, degree of response, appearance of side-effects, and anticipated duration of steroid therapy. Because it causes less water and sodium retention than most other glucocorticoids, the usual early sign of overdosage, i. e., a gain in body weight, is not a reliable index of overdosage with methylprednisolone. After relatively high initial doses, the ideal goal of maintenance therapy is to reduce dosage to the lowest possible level compatible with satisfactory clinical response.

In general, the dosage of methylprednisolone is about two-thirds the required daily dose of prednisolone or prednisone. The drug should be given in four divided doses, preferably after meals and at bedtime. For severe or acute conditions, suppressive doses ranging from 20 to 40 mg. or more per day are given. The suggested dose for acute rheumatic fever is 0.5 mg. per pound of body weight daily until the erythrocyte sedimentation rate has remained normal for one week. For mild or chronic conditions, the initial daily dose ranges from 6 to 20 mg. In chronic diseases, this initial dosage is reduced to maintenance levels by decrements of not more than 2 mg. every seven days. Ultimately, the maintenance dose is usually about one-half the original dose required for the initial control of symptoms.

Preparations: tablets 2 mg. and 4 mg.
Applicable commercial name: Medrol.
The Upjohn Company cooperated by furnishing scientific data to aid in the evaluation of methylprednisolone.

Proparacaine Hydrochloride.—2-Diethylaminoethyl 3-amino-4-propoxybenzoate hydrochloride.— The structural formula of proparacaine hydrochloride may be represented as follows:



Actions and Uses.—Proparacaine hydrochloride is an effective surface anesthetic agent useful in ophthalmology. Although it is a benzoic acid ester, proparacaine is chemically distinct from such other agents as procaine, benoxinate, or tetracaine in that the amino group is in the *meta* rather than in the *para* position. This difference in chemical structure may explain the lack of cross sensitization between proparacaine and other local anesthetic agents.

Proparacaine has an anesthetic potency slightly greater than that of an equal amount of tetracaine. Its onset of action is rapid; surface anesthesia of sufficient intensity to permit tonometry can generally be obtained within about 20 seconds after the instillation of 1 or 2 drops of a 0.5% solution. The duration of such anesthesia is about 15 minutes. Unlike some other topical anesthetics, proparacaine produces little or no initial irritation, stinging, or burning. It does not cause visible hyperemia, lacrimation, increased winking, epithelial drying, or stippling of the cornea, nor does it affect pupillary size. Thus, from the standpoint of onset and duration of action, intensity of anesthesia, and patient-tolerance, proparacaine appears to compare favorably with other agents used as ophthalmic anesthetics.

Proparacaine hydrochloride is useful for most ocular procedures that require topical anesthesia. Among these are tonometry, removal of foreign bodies and sutures, gonioscopy, conjunctival scraping for diagnosis, removal of chalazions from the conjunctival surface, and short operative procedures involving the cornea and conjunctiva. The drug may be used as a surface anesthetic prior to the retrobulbar injection of procaine for intraocular or orbital surgery. Proparacaine has also been employed as the sole anesthetic for cataract extractions and glaucoma surgery. If the drug is instilled at frequent intervals prior to beginning surgery, the depth and duration of anesthesia thus produced may be sufficient to permit these procedures.

Although laboratory studies indicate that proparacaine is too toxic for use as an injection anesthetic, its ophthalmic use has been notably free of side-effects or untoward reactions. To date, there have been few reports of drug sensitivity, either local or systemic. The drug is apparently safe to use in patients who are sensitive to procaine, benoxinate, and tetracaine. Possible deleterious effects or delays in wound healing occasioned by the long-term ophthalmic use of proparacaine are not known but they should be watched for.

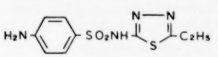
Dosage.—Proparacaine hydrochloride is administered only by topical instillation in the eye as a 0.5% solution. For tonometry, the usual dose is 1 or 2 drops immediately before measurement. For removal of sutures, the instillation of 1 or 2 drops two or three minutes before beginning the procedure is usually adequate; this dose is also used for removal of foreign bodies. When deep anesthesia is required, as in cataract extraction, 1 drop is instilled every 5 to 10 minutes for five to seven doses.

Preparations: solution (topical) 5 mg. per cc.

Applicable commercial name: Ophthaine.

E. R. Squibb & Sons, Division of Olin Mathieson Chemical Corporation, cooperated by furnishing scientific data to aid in the evaluation of proparacaine hydrochloride.

Sulfaethidole.—N¹-(5-Ethyl-1,3,4-thiadiazole-2-yl) sulfanilamide.—The structural formula of sulfaethidole may be represented as follows:



Actions and Uses.—Sulfaethidole is identical in chemical structure to sulfamethizole except that it contains an ethyl rather than a methyl group at the 5 position of the thiadiazole ring. It is, however, a much longer acting drug than sulfamethizole although its spectrum of activity is the same. The drug is useful for the treatment of systemic and urinary tract infections due to organisms sensitive to the bacteriostatic action of sulfonamides. It is readily absorbed from the gastrointestinal tract but does not undergo an appreciable degree of acetylation in the body; about 90 to 95% of the total blood and urine sulfonamide appears as the free form. Both the free and the conjugated forms of sulfaethidole are soluble in urine over a wide pH range. Hematuria, crystalluria, and other indications of renal toxicity have been rarely encountered during therapy with this compound. Because the drug is prepared in a sustained release form, therapeutic blood levels usually can be maintained for a sufficiently long time to necessitate oral administration only once every 12 hours.

The side-effects to be expected with sulfaethidole are the same as with other sulfonamides. However, the incidence of such side-effects—renal, systemic, or dermal—has been much lower. Serious side-effects, such as granulocytopenia and hemolytic anemia, have not been reported to date. Sulfaethidole is contraindicated only in patients with known sulfonamide sensitivity. (See the general statement on sulfonamide compounds in New and Nonofficial Drugs.)

Dosage.—Sulfaethidole is administered orally. The average maintenance dose for adults is 1.3 Gm. every 12 hours. This dose may be increased by one-third (1.95 Gm.) in severe infections, or decreased one-third (650 mg.) for prophylaxis. The average maintenance dose for children is 330 mg. per 25 lb. (11 kg.) of body weight every 12 hours. This dose may be doubled in severe infections or halved for prophylaxis. Initial (priming) doses should be double the maintenance doses.

Preparations: suspension (sustained release, oral) 130 mg. per cc.; tablets (sustained release) 650 mg.

Applicable commercial names: Sul-Spansion, Sul-Spantab.

Smith Kline & French Laboratories cooperated by furnishing scientific data to aid in the evaluation of sulfaethidole.

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POSTGRADUATE MEDICAL EDUCATION AS A MORAL PRECEPT

WHEN THE American Medical Association adopted the brief form of the Principles of Medical Ethics, the responsibility of each physician to continue his own education as well as to add to the sum total of knowledge for the benefit of his patients and the profession was expressed in Principle 2: "Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments."

Postgraduate or continuation education is a moral as well as an ethical commitment of the medical profession. Enrollment in medical school means more than simply four years of study. It involves a dedicated obligation to a lifetime of active education in view of the prodigious advances in medicine that occur continually. Members of the profession cannot ethically or morally avoid making all possible efforts to learn of the significant advances. Of what help to a sick person is any amount of research that provides means for his more adequate diagnosis or treatment unless his physician knows of this new knowledge? "Each physician must continue to learn in order that others may live." [1] Also, each physician must continue to learn in order to live in peace with himself.

Leaders in medicine have recognized for many years this moral responsibility. A principal reason for the organization of the American Medical Association in 1847 was concern regarding the standards of medical education and medical practice. Scientific sessions have formed a part of the Association meetings since its inception, and scientific exhibits were added to the meetings in 1899. THE JOURNAL was established in 1883. The Council on Medical Education, created in 1904 to replace the Committee on Medical Education first appointed in 1847, has throughout the decades since provided leadership and effective guidance for medical education.

In eras past, when medical advances occurred at a funereal pace easily assimilable by the profession without special effort, informal approaches to continuing education were adequate to the need. In the current setting, physicians require all the assistance they can secure in remaining abreast of scientific developments. Simultaneously with the accelerating pace of basic medical science and clinical advances, the reports of these gains have expanded exponentially so that the individual physician has an appalling problem in attempting to cope with all of the pertinent medical literature. In addition, as the profession has long known, reading alone cannot serve the total objectives of medical education at any level.

While the medical literature, scientific meetings, and day-to-day activities are important in education, as well as for other purposes, regular participation in postgraduate courses is recognized increasingly as an effective means of efficiently continuing medical education. This was accepted by an outside agency two years ago when the Bureau of Internal Revenue of the United States Treasury Department acted to consider such courses as a deductible (hence, a usual and expected) professional expense of physicians.

It is tempting for busy physicians to confuse excuses with valid reasons for nonparticipation in postgraduate medical education. For example, the

1. Hildebrand, W. B.: Presidential Address, GP **9**: 161 (April) 1954.
2. Vollan, D. D.: Physician as Lifelong Student, J. A. M. A. **157**: 912-920 (March 12) 1955.
3. Rising, J. D.; Delp, M.; Weinbach, E. P.; and White, R. C.: Postgraduate Medical Education in Kansas, J. A. M. A. **166**: 1602-1609 (March 29) 1958.
4. Postgraduate Medical Education, in Medical Education in the United States and Canada, J. A. M. A. **165**: 1431-1437 (Nov. 16) 1957.

Vollan opinion survey of 1952-1955 [2] indicated that distance of physicians from educational centers as well as the problem of no readily available substitute to care for patients were major deterrents to attendance at postgraduate courses even though the profession rated such courses as second only to reading as the preferred educational approach. A recent paper [3] in THE JOURNAL indicates that for Kansas, at least, distance of physicians from the University Medical Center had an inverse relationship to the number of physicians participating as well as the number of hours of their course work in three years. Also, there was no correlation between type of practice (solo or group) and the hours spent at postgraduate courses by physicians active in continuing their education. This study of physician performance seems to indicate that distance and patient coverage given as reasons for nonregistration in postgraduate courses may actually have been excuses.

The Council on Medical Education and Hospitals has in the past several years increased its interest and activities in regard to postgraduate medical education. An *ad hoc* Advisory Committee in this field was appointed in 1956, after the conclusion and publication of an extensive three-year survey. A Guide Regarding Objectives and Basic Principles of Postgraduate Medical Education Programs was published in July, 1957, and widely distributed after it was approved by the House of Delegates. The 57th Annual Report on Medical Education in the United States and Canada, prepared by the Council, contained a definitive study of current postgraduate course activities.[4] Studies are now in progress to determine more adequate approaches to the appraisal of the educational merit of the postgraduate courses listed. Another study, geographically oriented, in which 1956-1957 enrollment data are used, will provide information about the mobility of physicians registered in postgraduate courses, to assist in future planning.

In this issue of THE JOURNAL, the annual list Postgraduate Courses for Physicians is presented by the Council on Medical Education and Hospitals, based on inquiries earlier this year to all medical schools, many hospitals and medical societies, and other groups in the United States. Although the courses in that list are not evaluated—the list is not a selective one—the information supplied by the sponsors and presented in the list should provide a single reference source that will assist the medical profession in following through with its ethical and moral responsibility for continuing education.

TAX DEDUCTION OF EXPENSES OF POSTGRADUATE EDUCATION

For many years the American Medical Association sought to get the Internal Revenue Service to issue a regulation allowing physicians to deduct their expenditures incurred in postgraduate or continuation education. These efforts were rewarded by the issuance of a proposed regulation two years ago [1] which has now been adopted. The final version of the regulation incorporates several modifications in the proposed regulation, which were suggested by the A. M. A. Law Department. As it now stands the regulation applicable to the deduction of postgraduate educational expenses seems generally fair and equitable.

In essence, a practicing physician may deduct his expenses in taking a postgraduate or special course unless the course is taken with a view to specializing his practice or qualifying for an appointive post. The regulation justifies the deduction of expenses for courses taken in order to maintain the existing kind of practice, as contrasted with those taken for the purpose of beginning specialty practice. If his purpose in taking a course is primarily to keep abreast of new developments so as to maintain his existing practice, the expenses incurred by him are deductible. These expenses include tuition, travel, meals, and lodging.

The time which a physician devotes to continuing education will frequently represent a loss of earnings to him. The fact that he may deduct the cost of this education as a business expense will to some measure reduce the financial loss which he may sustain through the interruption of his practice. The regulation is set forth in full on page 2010 of this issue.

1. Tax Deduction Expenses for Education, Medicine and the Law, J.A.M.A. 161:1260-1261 (July 28) 1956.

CHANGE OF ADDRESS

If you change your address please notify THE JOURNAL at least six weeks before the change is made. Include the address label clipped from your latest copy of THE JOURNAL, being sure to clearly state both your old and new address. If your city has Postal Zone Numbers, be sure to include this Zone Number in your new address.

ORGANIZATION SECTION

REPORT OF JOINT COMMISSION ON ACCREDITATION OF HOSPITALS

The Joint Commission on Accreditation of Hospitals, 660 N. Rush St., has forwarded the following statement to THE JOURNAL.

FOREWORD

The Standards for Hospital Accreditation of the Joint Commission on Accreditation of Hospitals have been formally approved by the Board of Commissioners.

These Standards are considered necessary to insure the quality of medical care in hospitals which the Joint Commission can faithfully recommend to the public. They are not arbitrary or rigid in spirit yet they require general conformity to achieve accreditation by the Commission. To qualify for accreditation the hospital must have at least twenty-five beds, have been in operation at least twelve months and, if located in the United States, be listed in the Administrator's Guide issue of "Hospitals," published by the American Hospital Association.

The Standards are divided into basic principles and methods of procedure. Adherence to the basic principles is essential for the accreditation of all hospitals. The procedures are recommended as guides, dependent upon the type, size, degree of departmentalization, and resources of a particular hospital.

Aware of its responsibilities, the Board of Commissioners is constant in its study of the Standards. Convinced of the essentiality of the basic principles, it is dynamic and realistic in their implementation.

KENNETH B. BABCOCK, M.D., *Director.*

January 28, 1956

STANDARDS FOR HOSPITAL ACCREDITATION

Basic Principles

The following outlines the basic principles necessary for accreditation of a hospital by the Joint Commission on Accreditation of Hospitals. They are arranged in three sections according to the major functional divisions of a hospital.

I. ADMINISTRATION

Physical Plant—The buildings of the hospital must be constructed and arranged to insure the safety of the patient and promote his welfare.

Governing Body—The governing body has the legal and moral responsibility for the conduct of the hospital as an institution. It is responsible to the patient, the community, and the sponsoring organization. Its official representative is the chief administrative officer of the hospital.

Facilities for the following services are essential:
- Dietary
- Medical Records
- Pharmacy or Drug Room
- Clinical Laboratory, and pathological services
- Radiology
- Medical Library

II. MEDICAL STAFF

The medical staff is responsible to the patient and to the governing body of the hospital for the quality of all medical care rendered to patients in the hospital and for the ethical and professional practices of its members.

III. NURSING

There must be a graduate registered nurse on duty at all times and professional nursing care must be available for all patients at all times.

STANDARDS FOR METHODS OF PROCEDURE

I. ADMINISTRATION

A. Physical Plant

The buildings of the hospital must be solidly constructed with adequate space and safeguards for each patient. Space provided shall not be less than required by existing legal codes. The hospital shall provide:

1. Fire protection by installation of rigid controls and written fire control plans, the elimination of fire hazards, the installation of necessary safeguards such as extinguishers, sprinkling devices, fire barriers, etc., to insure rapid and effective fire control.
2. A sanitary environment to avoid sources and transmission of infections.
3. Facilities for isolation of patients with communicable diseases, especially in obstetrical, newborn, and pediatric sections.
4. Emergency lighting in operating, delivery and emergency rooms, nursery and stairwells.
5. Adequate diagnostic and therapeutic facilities.

B. Governing Body

The governing body is legally and morally responsible for the conduct of the hospital. In the discharge of its duties, it places the responsibility for the medical care of the patient in the hospital primarily upon the medical staff. For effective performance the governing body should do the following:

1. Adopt bylaws in accordance with legal requirements.
2. Meet at regular stated intervals.
3. Appoint committees. There should be an Executive Committee and others as indicated for special purposes.
4. Establish a formal means of liaison with the medical staff preferably by a Joint Conference Committee.
5. Appoint members of the medical staff.
6. Appoint a qualified hospital administrator who is the official representative of the governing body. The administrator is responsible for the conduct of the hospital, and provides liaison among the governing body, the medical staff, the nursing staff, and other departments of the hospital.

C. Essential Services which must be maintained

1. Dietary Department

a. There shall be an organized department directed by qualified personnel and integrated with other departments of the hospital.

The member organizations of the Joint Commission are the American College of Physicians, the American College of Surgeons, the American Hospital Association, the Canadian Medical Association, and the American Medical Association.

b. Facilities shall be provided which meet the requirements of the local sanitary code for the storage, preparation, and distribution of food for the general dietary needs of the hospital. These shall include facilities for the preparation of special diets.
c. There shall be a qualified dietitian on full time or on a consultation basis and in addition, administrative and technical personnel competent in their respective duties.
d. There shall be a systematic record of diets, correlated with the medical records.
e. Departmental and interdepartmental conferences shall be held periodically.

2. *Medical Record Department*
a. Administrative Responsibilities
1) There shall be a medical record maintained on every patient admitted for care in the hospital.
2) Records shall be kept inviolate and preserved for a period of time not less than that determined by the Statute of Limitations in the respective state.
3) Qualified personnel adequate to supervise and conduct the department shall be provided.
4) A system of identification and filing to insure the rapid location of a patient's medical record shall be maintained. The unit number system is suggested; however, a serial number system or modification of this is acceptable.
5) Records should be indexed according to disease, operation, and physician and should be kept up-to-date.
6) All clinical information pertaining to a patient should be centralized in the patient's record.
7) The Standard Nomenclature should be used as a nomenclature and is preferred if medical records are coded.
b. Medical Staff Responsibilities
1) The medical record must contain sufficient information to justify the diagnosis and warrant the treatment and end-results.
2) Only physicians and members of the house staff are competent to write or dictate medical histories and physical examinations.
3) Current records and those on discharged patients should be completed promptly.
4) Records must be authenticated and signed by the physician.
c. The medical record should contain the following information:
1) Identification data
2) Complaint
3) Present illness
4) Past history
5) Family history
6) Physical examination
7) Consultations
8) Clinical laboratory reports
9) X-ray reports
10) Provisional diagnosis
11) Tissue report
12) Treatment: medical and surgical
13) Progress notes
14) Final diagnosis
15) Summary
16) Autopsy findings

3. *Pharmacy or Drug Room*
a. There shall be a pharmacy directed by a registered pharmacist or drug room under competent supervision.
b. Facilities shall be provided for the storage, safeguarding, preparation, and dispensing of drugs.
c. Personnel competent in their respective duties shall be provided in keeping with the size and activity of the department.
d. Records shall be kept of the transactions of the pharmacy, and correlated with other hospital records where indicated. Such special records shall be kept as are required by law.
e. Drugs dispensed shall meet the standards established by the United States Pharmacopeia, National Formulary, New and Nonofficial Remedies, British Pharmacopeia, or Canadian Formulary.
f. There should be an automatic stop order on dangerous drugs.

4. *Laboratories*
a. Clinical
1) A clinical laboratory adequate for the individual hospital must be maintained in the hospital.
2) Provision shall be made to carry out chemical, bacteriological, and serologic examinations.
3) Facilities should be available at all times.
4) Personnel adequate to supervise and conduct the service should be provided.
5) Urinalysis and at least a hemoglobin or hematocrit should be routine examinations on all admissions.
6) Signed reports should be filed with the patient's record and duplicate copies kept in the department.
b. Pathological
1) The services of a pathologist must be provided as indicated by the needs of the hospital.
2) All tissues removed at operation should be sent for examination. The extent of the examination should be determined by the pathology department.
3) Signed reports of tissue examinations should be filed with the patient's record and duplicate copies kept in the department.
4) Tissue reports should be indexed according to pathologic diagnosis.
c. Blood Bank
Facilities for procurement and safe-keeping of blood should be provided or readily available.

5. *Radiology*
a. The hospital must maintain radiologic services according to the needs of the hospital.
b. The radiology department shall be free of hazards for patients and personnel.
c. The interpretation of radiologic examinations shall be made by physicians competent in the field.
d. Signed reports should be filed with the patient's record and duplicate copies kept in the department.
e. Reports should be indexed according to radiologic diagnosis.

6. *Medical Library*
a. The hospital must maintain a medical reference library according to the needs of the hospital.
b. Facilities should be provided to meet the requirements of the services in the hospital.
c. Basic textbooks and current periodicals should be available and catalogued according to the needs of the hospital.
d. Personnel should be provided to assure efficient service to the medical staff.

D. Services which may be maintained

1. *Medical Social Service Department.* If a department is maintained:
a. There shall be an organized department directed by a qualified medical social service worker, and integrated with other departments of the hospital.

b. Facilities shall be provided which are adequate for the personnel of the department, easily accessible to patients and to the medical staff, and which assure privacy for interviews.
c. Records of case work shall be kept. Such records shall be available only to the professional personnel concerned.
d. Departmental and interdepartmental conferences shall be held periodically.

2. *Emergency Service.* If a service is maintained:
a. There shall be a well organized department directed by qualified personnel and integrated with other departments of the hospital.
b. Facilities shall be provided to assure prompt diagnosis and emergency treatment.
c. There shall be adequate medical and nursing personnel available at all times.
d. Adequate medical records on every patient must be kept.
e. There shall be a written plan for the care of mass casualties and this plan should be coordinated with the inpatient and outpatient services of the hospital.

II. MEDICAL STAFF

A. Responsibilities

The governing body of the hospital must obviously delegate the responsibility of medical functions to the medical staff, including recommendations as to the professional qualifications of all who practice in the hospital. The medical staff is responsible for the quality of medical care rendered to patients in the hospital. Maintaining high standards of medical care will depend upon the character of the staff and the effectiveness of its organization to carry out the following duties:

1. Selection of those recommended for staff appointments and hospital privileges.
2. Constant analysis and review of the clinical work done in the hospital.
3. Support of medical staff and hospital policies.
4. Maintenance of adequate medical records.
5. Procurement of autopsies (a minimum of 20 to 25% of hospital deaths).
6. Holding of necessary consultations. Except in emergency, consultation with another qualified physician shall be required in all first Cesarean sections and in all curettages or other procedures by which a known or suspected pregnancy may be interrupted. The same requirement shall apply to operations performed for the sole purpose of sterilization on both male and female patients. Included in consultations required under this Standard are all those which are required under the rules of the hospital staff. In major surgical cases in which the patient is not a good risk, and in all cases in which the diagnosis is obscure, or when there is doubt as to the best therapeutic measures to be utilized, consultation is appropriate. Obviously, judgment as to the serious nature of the illness and the question of doubt as to diagnosis and treatment rests with the physician responsible for the care of the patient. It is the duty of the hospital staff through its chiefs of service and Executive Committee to see that members of the staff do not fail in the matter of calling consultants as needed. A consultant must be well qualified to give an opinion in the field in which his opinion is sought. A satisfactory consultation includes examination of the patient and the record and a written opinion signed by the consultant which is made part of the record. When operative procedures are involved, the consultation note, except in emergency, shall be recorded prior to operation.

B. Membership

1. Appointment

a. Procedure

Staff appointments are made officially by the governing body. Recommendations are customarily made by the active staff, and in no case should a governing body make an appointment to the staff without such a recommendation.

b. Qualifications

Members of the staff must be qualified legally, professionally, and ethically for the positions to which they are appointed.

c. Tenure

Limited terms of appointment are preferred but not required. The prevailing custom is for a term of one year, with reappointments continued as long as qualifications remain satisfactory.

2. Categories

The privileges of each member of the medical staff shall be determined on the basis of professional qualifications and demonstrated ability.

a. Active Staff

Regardless of any other categories having privileges in the hospital, there shall be an active staff, properly organized, which shall perform all the organizational duties pertaining to the medical staff. These shall include:

1) Maintenance of the proper quality of all medical care and treatment in the hospital.
2) Organization of the medical staff, including adoption of rules and regulations for its government (which require the approval of the governing body), election of its officers, and recommendations to the governing body upon all appointments to the staff and grants of hospital privileges.
3) Other recommendations to the governing body upon matters within the purview of the medical staff.

b. Other Categories of the Staff

In larger hospitals, and in some smaller hospitals, the medical staff may include one or more of the following categories in addition to the Active Staff, but this in no wise modifies the duties and responsibilities of the Active Staff.

1) Honorary Staff

The Honorary Staff shall be former Active Staff, retired or emeritus, and other physicians of reputation whom it is desired to honor.

2) Consulting Staff

The Consulting Staff shall be recognized specialists willing to serve in such capacity. A member of the Consulting Staff may also be a member of the Active Staff, but only if the two appointments are made.

3) Associate Staff

The Associate Staff shall be those members who use the hospital infrequently or those less experienced members undergoing a period of probation before being considered for appointment to the Active Staff.

4) Courtesy Staff

The Courtesy Staff shall be those who desire to attend patients in the hospital but who, for some reason not disqualifying, are ineligible for appointment in another category of the staff.

5) Privileges of the Hospital

Privileges of the hospital may be extended to other qualified physicians under the same conditions as apply to the Courtesy Staff.

C. Organization

1. Officers

There shall be a President or Chief of Staff, a Vice-President or Vice-Chief, a Secretary, and such other officers as may be necessary for the government of the staff. These officers shall come from the Active Staff and shall be elected by the Active Staff, unless this is precluded by hospital organization.

2. Bylaws

Bylaws conforming to the principles expressed by the Joint Commission on Accreditation of Hospitals shall govern the staff.

3. Committees

The complexity of committee organization depends upon the size and composition of the medical staff of the individual hospital. A small staff may wish to function as a committee of the whole. Others may wish to combine committee functions in two or three committees. The structure of committee organization is a decision to be made by the medical staff so long as the following required committee functions are carried out:

a. Executive Committee

The Executive Committee shall co-ordinate the activities and general policies of the various departments, act for the staff as a whole under such limitations as may be imposed by the staff, and receive and act upon the reports of the Medical Records, Tissue and such other Committees as the medical staff may designate. The Executive Committee shall meet at least once a month and maintain a permanent record of its proceedings and actions.

b. Qualifications or Credentials Committee

The Qualifications or Credentials Committee shall review applications for appointment and reappointment to all categories of the staff. They shall delineate the privileges to be extended to the applicant and make appropriate recommendations to the staff.

c. Joint Conference Committee

The medical staff members of the Joint Conference Committee shall represent the staff in meetings with the governing body of the hospital or a committee of that body. This Committee shall be a medicoadministrative liaison committee and the official point of contact among the medical staff, the governing body, and the administrator.

d. Medical Records Committee

The Medical Records Committee shall supervise and appraise the quality of medical records, and shall insure their maintenance at the required standard. The Committee shall meet at least once a month and submit to the Executive Committee a report in writing which will be made a part of the permanent record.

e. Tissue Committee

The Tissue Committee shall study and report to the staff, or to the Executive Committee of the staff, on the agreement or disagreement among the preoperative, postoperative, and pathological diagnoses and on whether the surgical procedures undertaken in the hospital were justified or not. This study will also include those procedures in which no tissue was removed. The report to the Executive Committee shall be in writing on at least a monthly basis.

4. Staff Meetings

The sole objective of staff meetings is improvement in the care and treatment of patients in the hospital. This is facilitated by a thorough review and analysis of the clinical work done in the hospital on at least a monthly basis.

a. There are three patterns for medical staff meetings which will accomplish this purpose:

1) Monthly meetings of the active staff, not less than twelve in each calendar year.

2) In well organized and departmentalized hospitals, departmental conferences and clinicopathologic conferences may be substituted for meetings of the entire staff, provided that an adequate review of the clinical work done in the hospital is covered by one or another of such conferences, and further provided that at least one meeting of the entire Active Staff is held during each quarter of the year. At such meetings a report of the review of the medical work of the hospital must be presented by the Executive Committee. In very large hospitals where attendance requirements are obviously met by departmental meetings and where physical facilities are not available for large audiences, the Commission may accept departmental meetings in lieu of meetings of the entire medical staff.

3) In hospitals where adequate review of the medical work in the hospital is carried out by the Medical Records and Tissue Committees, and appropriate study and action is taken by the Executive Committee on not less than a monthly basis, one meeting of the entire Active Staff must be held during each quarter of the year. At such meetings a report of the medical work of the hospital must be presented by the Executive Committee.

b. Active Staff attendance shall average at each meeting at least 50% of the active staff who are not excused by the Executive Committee for just cause. Each active staff member shall attend 50% of staff meetings unless excused by the Executive Committee for just cause.

c. In addition to matters of organization, the programs of such meetings must include a report of the Executive Committee and be limited largely to the review of current or recent cases in the hospital. Scientific programs not associated with the work of the hospital do not meet this requirement.

d. Business or other executive sessions of the staff shall be conducted by the Active Staff and other categories of the staff may be excluded.

e. Adequate minutes of all meetings shall be kept.

D. Departmentalization

Division of the staff into services or departments to fulfill medical staff responsibilities promotes efficiency and is recommended in general hospitals with 75 or more beds. Functional division of the medical staff into more than the minimal medical and surgical services is frequently desirable in larger hospitals. It is necessary that each autonomous service or department be organized and function as a unit. The following are considered minimal.

1. Personnel

Personnel of each service or department shall be qualified by training and demonstrated competence, and shall be granted privileges commensurate with their individual abilities.

2. Chief of Service or Department

The chief of service or department shall be the member of the service or department best qualified by training and experience, and demonstrated ability for the position. He shall be responsible for the general character of the professional care of the patients on his service or department, and make recommendations as to qualifications of its members. His duties shall also include recommendation to the administrator as to the procurement of drugs, supplies, instruments, and equipment to insure maximum benefit to the patient. Additional duties of the chief of service or department shall include the following:

a. Surgical—recommendations as to sterile procedures and operating room policies.
b. Obstetric.
1) Supervision of care of newborn, if there is no organized service responsible for the nursery;
2) Recommendations as to sterile procedures and delivery room policies.
c. Clinical Laboratory.
1) Participation in staff and departmental meetings;
2) Reporting upon all specimens examined, and maintaining a duplicate file of these reports in the department. This includes all tissues removed in the hospital.
d. X-ray Department
1) Participation in staff and departmental meetings;
2) Reporting upon all examinations and treatments, maintaining a duplicate file of these reports in the department;
3) Insuring that safety precautions as to radiation and fire are observed strictly.

3. Conferences

Each service or department should have frequent, periodic conferences, attended by all its members, to consider clinical and organizational problems peculiar to the service. Records of these meetings shall be kept, become part of the records of the medical staff, and be available for inspection.

E. Departments which may be maintained

1. Anesthesia

The organization of the Department of Anesthesia shall be comparable to that of the other services of the medical staff. In addition, there shall be required in every case:
a. Preanesthetic physical examination with findings recorded;
b. Anesthetic record on special form;
c. Postanesthetic follow-up, with findings recorded.

2. General Practice Department

A Department of General Practice shall be an organized segment of the medical staff comparable to that of other staff departments with the following modifications:
a. The responsibilities of this department shall be limited to administration and education. It shall not be a clinical service and no patients shall be admitted to the department. If and when desirable, however, the department may be made responsible for conducting the outpatient clinic in whole or in part.
b. Since the Department of General Practice will not have a separate service, the members of the General Practice Department shall have privileges in the clinical services of the other departments in accord with their experience and training, on recommendation of the Credentials Committee. In any service in which any general practitioner shall have privileges, he shall be subject to the rules of that service and subject to the jurisdiction of the chief of the clinical service involved.
c. The medical staff should give to the General Practice Department such administrative responsibilities in the conduct of medical affairs as are desirable to meet the needs of the hospital.

3. Rehabilitation Department

The organization of the Rehabilitation Department shall be comparable to that of other departments of the hospital.

4. Outpatient Department

The Outpatient Department shall be organized into sections (clinics) the number of which shall depend on the degree of departmentalization of the medical staff, available facilities, and the needs of the community.
a. Organization and Personnel
There shall be such professional and nonprofessional personnel as are required for efficient operation.
b. Facilities
Facilities shall be provided to assure the efficient operation of the department.
c. Medical Records
Medical records shall be maintained, and correlated with other hospital medical records.
d. Conferences
Conferences, both departmental and interdepartmental, shall be conducted to maintain close liaison between the various sections within the department and with other hospital services.

5. Dental

The dental staff shall conform in general to standards established for the medical staff. In addition:
a. Members of the dental staff must be qualified legally, professionally, and ethically for the positions to which they are appointed.
b. Patients admitted for dental services shall be admitted on a surgical service and shall be the responsibility of the chief of that service.
c. Adequate medical survey by a member of the medical staff shall be done on each patient before dental surgery. Indicated consultations shall be held in complicated cases.

III. NURSING DEPARTMENT

Adequate care of the hospital patient requires well-organized and efficient nursing. All hospitals must meet the following requirements for accreditation:

A. Functions and Responsibilities

Nursing care for all patients is a primary responsibility of the nursing department, which must function in close relationship with other services of the hospital, both administrative and professional. This requires the establishment of a departmental plan of administrative authority with a definite outline of responsibilities and duties for each category of nursing personnel. This shall deal not only with patient care, but also with the educational responsibilities of the nursing department. Adequate nursing service must also be provided for the surgical suite, delivery rooms, clinics and other services of the hospital in keeping with the size and degree of activity.

B. Personnel

Personnel engaged for administrative or professional duties must be qualified by training and experience, and demonstrated ability for their assignments. All hospitals must provide nursing personnel to meet the following minimum requirements:
1. Director of department.
2. Assistant to the director for evening and night services.
3. Department or floor supervisors.
4. An adequate number of professional nurses and ancillary personnel for bedside care.

Nurses assigned to care for obstetric patients and the newborn must not have other duties which may create danger of infection being carried to this service.

C. Records

Adequate records shall be maintained.

D. Departmental Meetings and Conferences

Meetings of the nursing staff, or of each department staff, shall be held at least monthly for discussion of nursing problems related to care of patients and administration.

HEARINGS BEFORE CONGRESS ON VETERANS CARE

June 18, 1958

Honorable Olin E. Teague
Chairman, Committee on Veterans' Affairs
U. S. House of Representatives
Washington 25, D. C.

Dear Congressman Teague:

In connection with the current hearings of your Committee concerning Veterans compensation legislation, I would like to take this opportunity to restate the position of the American Medical Association on certain of the principles involved.

Our position with respect to the provision, by the Federal Government, of medical care and hospitalization for veterans was last restated by our House of Delegates in 1956. The Association recommends that:

1. Medical care and hospitalization be supplied by the Federal Government to those veterans who have physical or mental diseases or disabilities which were incurred or aggravated as a result of military service; and

2. Medical care and hospitalization would not be provided for veterans with non-service-connected diseases and disabilities.

The American Medical Association is and always has been in complete agreement that the Federal Government has the duty to care for any man who has become physically or mentally diseased or disabled as a result of military service. We believe, however, that the provision of medical care and hospitalization for veterans with non-service-connected disabilities by the Federal Government is unsound. Therefore, we are opposed to the existing law as well as to any bills which would continue to extend the provision of medical care by the Federal Government for veterans with non-service-connected diseases and disabilities.

We also note that there are a number of bills, now pending before the Veterans Affairs Committee, which would establish a presumption of service-connection for a large variety of diseases and conditions or extend the period of years which previously recognized presumptions of service-connection would operate. We have always been opposed to the determination of service-connection of diseases and disabilities by legislative enactment. We believe that the question of whether a given disease in a given individual, is a result of or was aggravated by military service, can only be properly answered on the basis of the facts of the individual case. There are many factors which must be determined and weighed on the basis of the actual case history of the individual before service-connection can be accurately determined.

It is our belief that the only true mission of Veterans Administration's Department of Medicine and Surgery, is to provide medical care for veterans with service-connected ills. Nevertheless, as long as non-service-connected cases are legally eligible under the present laws, we believe that every effort must be made to insure that service-connected cases, which have now dwindled to a mere 15% of annual hospital admissions, do not become relegated to the background of the VA hospital picture.

I would appreciate it if this letter were made a part of the record of the current hearings.

Sincerely yours,
F. J. L. Blasingame, M.D.
General Manager

Reproduced below is the statement of the American Medical Association before the Senate Committee on Armed Services relative to reorganization of the Department of Defense. Testimony was presented by Dr. Richard L. Meiling on June 26, 1958.

Mr. Chairman and Members of the Committee:

My name is Richard L. Meiling. I am Chairman of the Committee on Military Medical Affairs and a member of the Council on National Defense of the American Medical Association. I am a practicing physician in Columbus, Ohio, and Associate Dean of the College of Medicine of Ohio State University.

In 1948, I served as Medical advisor to the Committee on the National Security Establishment of the first Hoover Commission. Later, I served as a member of the Armed Forces Medical Advisory Council to the Secretary of Defense; and from 1949 to 1951, was Director of Medical Services, Chairman of the Armed Forces Medical Policy Council and the Assistant to the Secretary of Defense for Medical and Health Affairs. From 1951 to 1953, I served as a consultant to the Secretary of Defense.

I appear today on behalf of the American Medical Association. Our statement concerning the "President's Defense Reorganization Plan" will be limited to a discussion of the need for maintaining the position and office of "The Assistant Secretary of Defense (Health and Medical)" within the Department of Defense. H. R. 12541, as passed by the House of Representatives, as well as S. 3544, and the President's Reorganization Plan, makes no provision for retaining this office and position.

Our Association has demonstrated for more than a century its interest in assuring that the best available medical services are provided for our Armed Forces in time of war and peace. Since the enactment of the National Security Act of 1947, the Association has been instrumental in presenting,

to both the Legislative and Executive branches of the Government, our recommendations concerning the need for health and medical policy coordination at the highest level of our Government.

In 1948, the first Hoover Commission recommended that, to be effective, control over military medical policy should be exercised at the level of the Secretary of Defense. The first step in this direction was taken in July 1949 by administrative action of the Secretary of Defense. In 1953, the Rockefeller Committee on the Department of Defense Organization, recognizing that stronger medical direction was needed, stated that the position of Assistant Secretary of Defense (Health and Medical) was justified and necessary to provide adequate staff assistance in the field of medicine and health to the Secretary of Defense. Reorganization Plan no. 6, which was prepared as a result of this recommendation and which was adopted in 1953, provided for establishing this position. In 1955, the Hoover Commission recommended still further strengthening of the position of the Assistant Secretary of Defense (Health and Medical).

The revolutionary changes that have taken place in the technique and weapons of war have drastically accelerated the scale and tempo of military destructiveness. These developments have, at the same time, increased the compelling need for a unified medical and health policy and program control throughout the administrative and command structure of the defense establishment.

Since the establishment in 1949 in the Office of the Secretary of Defense of a unified policy control of the military medical services, the United States Armed Forces have experienced the lowest case fatality rate of any period in peace and in war.

At the same time, the military medical services have maintained the highest effective rate while American Armed Forces were serving in disease-ridden areas throughout the world and under some of the most hazardous conditions. It was the military medical services which established the precedent for a unified, military supply procurement agency. It was through their efforts that a "single" supply catalog was set up. The Department of Defense blood program for supplying whole blood for our overseas command was established during the Korean campaign.

Economy and efficiency have been established by joint utilization of military medical facilities, military medical logistics, intelligence and operation, and patient evacuation and transportation. This cooperation has also proved effective in the field of research, scientific development and in educational and professional programs. All this has been under the policy and program control of the Assistant Secretary of Defense (Health and Medical) and his predecessors in the office of the Secretary of Defense.

During the Korean conflict, this office directed the coordination of medical and health liaison with the forces of the United Nations, a program which has been continued with NATO and SEATO forces. During this same period, this office established the first governmental inter-agency medical council responsible for the coordination of medical efforts on behalf of our wartime and peacetime health and medical care missions.

These past nine years of experience have clearly demonstrated the need and effectiveness of the Assistant Secretary of Defense (Health and Medical) in the formulation of military medical policy and programs throughout all echelons of the Department of Defense. At the same time, the incumbent of this position, because of its rank, has commanded the respect of his opposite numbers in the highest circles in our own government, foreign governments, and in the professional and scientific organizations.

It is the considered opinion of the American Medical Association that to abolish or downgrade the position of the Assistant Secretary of Defense (Health and Medical) would have a most deleterious effect at all echelons within the defense organization upon the medical and health services of our Armed Forces and upon the morale of military personnel. This effect would involve the morale of personnel, as well as medical and health policies and programs, at all echelons of the defense organization. In addition to eliminating a central agency within the Department of Defense for dealing with military health problems, the abolishment or downgrading of this office would be reflected in the inter-agency health programs within our own government and in the medical and health relationships between our government and the other governments with whom we are allied.

We believe, therefore, that it is in the best interests of the Armed Forces, the military medical and health services, and our country, that the position of the Assistant Secretary of Defense (Health and Medical) be maintained in the Department of Defense with a civilian physician appointed to this position.

It is our specific recommendation, therefore, that the bill be amended by the addition of this provision: "One Assistant Secretary shall perform such duties and exercise such power as the Secretary of Defense may prescribe in the field of health and medicine." May I thank you on behalf of the American Medical Association for your attention and assure you of the Association's desire to cooperate and assist in every way possible on matters relating to our national security, the military medical services and the provision of the best possible health services to the personnel of the Armed Forces.

Reproduced below are statements of the American Medical Association before the Committee on Ways and Means relative to amendments to the Social Security Act. Testimony was presented by Drs. Leonard Larson and Frank H. Krusen on June 27, 1958.

Dr. Larson: I am Dr. Leonard Larson of Bismarck, North Dakota.

I am appearing here . . . as the representative of the Board of Trustees of the American Medical Association, with Dr. Frank H. Krusen of Rochester, Minnesota, to discuss with you the views of the medical profession concerning certain of the provisions of H. R. 9467, 85th Congress, and other similar bills. In accordance with the instructions included in your release of May 29, we are limiting our testimony to matters which are of primary interest to the medical profession. We may, however, request permission later to submit a written statement, for the record; outlining our position on the other bills before your Committee dealing with the Social Security program.

Before calling on Dr. Krusen, I would like to discuss the general attitude of the medical profession regarding proposals such as H. R. 9467 and to briefly review with you some of the more important recent medical advances under our present system of medical care.

In 1949, when legislation providing for a program of national compulsory health insurance was pending before Congress, we strongly opposed it. It was thereafter clearly rejected by the Congress, and the American people. Today, you have before you proposals which would authorize service benefits in the form of hospitalization and surgical care for the retired and survivor beneficiaries under Title II of the Social Security Act. Such a proposal would mean a federally financed and federally controlled system of medical and hospital care, first for Social Security beneficiaries, subsequently for other groups and ultimately for everyone.

The medical profession has been and is still acutely aware of the existence of medical care problems among the aged. We agree that efforts to solve these problems should be continued and increased. We do not agree, however, with the advocates of the pending legislation, as to the nature and extent of the problems, or as to the means of solving them. We feel, as do many others, that traditional voluntary private methods can eliminate existing deficiencies and at the same time preserve individual and community freedom.

In reviewing the progress which has been made through the private enterprise approach it is evident that federal intervention is not required. I shall not outline the impressive record which has been established by the private health insurance industry and by the Blue Shield and Blue Cross plans. Representatives of these agencies have presented their own statements in this regard. I would like, however, to comment very briefly about medical progress in general.

The advances of medical science since the beginning of the twentieth century offer convincing evidence of what can be done when competent medical researchers and practitioners have an opportunity to work with complete freedom. A review of the medical discoveries since the turn of the century would require volumes. Drugs and operations, for example, alone could provide endless material for discussion of the forward march of medicine. Insulin, vitamins, sulfanomides, penicillin and other antibiotics are only a few of the outstanding discoveries in the drug field. Isotopes and betatrons have become part of the medical language. Entirely new approaches to illness have been discovered, as a result of which the full possibilities of what were practically unknown subjects such as physical medicine and rehabilitation, are now being explored with a thoroughness that offers much promise for the future.

The decline in the general mortality rate from 17.2 deaths per 1,000 population in 1900 to only 9.6 in 1957 underscores the health progress which has been made. While the population has doubled in this period, the number of persons over 65 years of age has quadrupled and a significant gain in life expectancy, even in late middle age, has resulted from the mortality reduction. Life expectancy at birth in 1900 was estimated at 47.3 years; in 1955 it was estimated at 70.0 years.

Thus, we in medicine have helped to create not only the problems of the aged, we have helped to create the aged. We have done it under the free choice system. We can solve the problems in the same way.

The American Medical Association has, throughout its history, been a champion of sound progress in medicine. It has had to fight many battles against quackery, against improper interference and against slipshod medical training and practice. As an association, we will continue to support all programs for the good of the health of the public, as we have done over the years. It is our conviction, however, that the medical provisions of H. R. 9467 are unwise, unnecessary and not in the public interest.

In addition to the points which Dr. Krusen will present, let me point out that no one knows what this proposed program would cost. It is our best estimate that initially it would run about two billion dollars per year. What it would cost eventually cannot be estimated. But we do know historically that the cost of programs such as this one is invariably much higher than the amount initially predicted for them—witness the financial plight of socialized medicine in England.

This tremendous and unpredictable drain on the Social Security Trust Fund could seriously jeopardize the actuarial soundness of the entire program. The retirement funds of millions of Americans would be endangered through the launching of a program of this type at a time when the Social Security system, for the first time in history, is receiving less income than is being paid out.

The proposal also departs from the best thinking of social insurance experts who agree that the original "floor-of-protection" concept of the Social Security Act should not be violated. Up to now, the principle of Social Security has been one of cash payments to insured persons who are disabled or retired or to their survivors. The pending proposals would graft on to this cash benefit system a health service program.

The members of the medical profession, as citizens and as physicians, look with suspicion and fear upon legislation, such as H. R. 9467 which, in our opinion, would stifle and destroy the energetic and imaginative free-enterprise medical programs now in progress. A proposal which would legislate the aged into a permanent state of dependency and most important one that would propel us completely and irresponsibly into a federally controlled health care program.

With your permission, Mr. Chairman, I would like to call on Dr. Krusen to present additional views with respect to H. R. 9467.

Dr. Krusen: As Dr. Larson has stated, the primary interest of the American Medical Association in the Social Security legislation pending before this Committee is related to H. R. 9467 and similar bills.

Before identifying and discussing the provisions of these proposals, I would like to state that the medical profession has not in the past, and is not now, taking a position in opposition to the over-all Social Security program. The American Medical Association did not oppose the passage of the Social Security Act in 1935 or subsequent amendments which adhered to its original basic character as a "floor-of-protection" cash benefit program. However, H. R. 9467, 85th Congress and other recent proposals, which would introduce disability and health service benefits into the Old Age, Survivors and Disability Insurance structure, represent, in our opinion, a major and dangerous deviation from the original concept of the system.

H. R. 9467, if enacted, would authorize a federally subsidized and controlled system of hospital, surgical, nursing home and dental care, irrespective of need, for between 12 and 13 million eligible Social Security beneficiaries. This entire program would be under the direction and control of the Department of Health, Education and Welfare and would be financed, in part, by an increase in Social Security taxes.

Hospital care, including drugs, appliances and services customarily furnished by a hospital, such as bed and board, nursing care, laboratory services, and ambulance services would be available, subject to administrative regulations, in those hospitals that enter into a written agreement with the administering agency. Eligible nursing homes would be those where "skilled nursing care" could be obtained, provided a written agreement was negotiated with the government. Physicians recognized by the bill as qualified to perform non-elective surgery would be limited to those certified by the American Board of Surgery or members of the American College of Surgeons. Hospitals, nursing homes and physicians would all be required to accept, in full payment for facilities and services, charges and fees established by the Secretary of the Department of Health, Education and Welfare.

Before commenting in general on the medical problems of the aged, I would like to outline for the Committee some of the more specific reactions which the medical profession has to H. R. 9467. First of all, let me say that, in our opinion, this legislation would inevitably result in poorer—not better—health care for the intended beneficiaries.

Because of the relatively recent emergence of this problem, no one in this country has at this time sufficient information on the health needs of the aged on which to base authoritatively such a drastic, far-reaching proposal. However, some of the things we do know are that the aged, for the most part, do not need short stays in general hospitals but rather improved home and community care as well as less costly and improved chronic illness and nursing home facilities. We also know that the medical needs of the aged are primarily non-surgical and that the surgical care now being provided is supplied primarily by physicians who are not Board Certified and who are not members of the American College of Surgeons.

However, the most serious aspect of this legislation is that it is National Compulsory Health Insurance all over again. Under this proposal, the federal government would finance the health care of from 12 to 13 million citizens through earmarked compulsory taxes; the government would control the disbursement of funds; the government would determine the benefits to be provided; the government would set the rates of compensation for hospitals, nursing homes and physicians; the government would audit and control the records of hospitals, nursing homes and patients; and the government would promulgate and enforce standards of hospital and medical care.

Under this proposal the beneficiaries would be restricted in their choice of hospital and physician. Only selected physicians and those hospitals and nursing homes entering into agreements with the

Federal government would participate. Inasmuch as many highly qualified hospitals and doctors would prefer to remain independent of government control, even if eligible to participate, there would be a limitation in the number of physicians and medical facilities available.

The professional relationship between the doctor and his patient would be hampered. Government regulations would be imposed on patient and physician alike, bringing a third party between them. Required conformance to administrative regulations could also hamper the physician from prescribing treatment which, in his professional opinion, is indicated.

The hospitalization provisions of the proposal would create a needless and dangerous overcrowding of already hospital facilities. With personal and family financial responsibility eliminated, many aged persons would seek unnecessary hospital and medical care for trivial and imaginary illnesses and would become unduly concerned with their health. In other countries where similar legislation is in effect, there has been a staggering increase in the use of hospital facilities by the aged.

The bill also says, in effect, "The aged cannot obtain voluntary health insurance protection." This is not factual, since more than 40% of the aged presently have some form of voluntary health insurance. These figures are particularly significant when you realize that only 20% were covered as recently as 1950. This rate of progress shows that the problem is being solved by the health insurance industry which is steadily gaining a vast experience in this relatively new field of medical and hospital insurance. H. R. 9467 would destroy the voluntary health insurance business among the aged group and could eventually, we feel, destroy the entire voluntary private health insurance movement, which now covers some 123,000 Americans.

Inasmuch as this legislation primarily concerns persons in the older age group, I would like to comment on the nature of their medical care problems and what the medical profession and other health groups are doing in their behalf.

In the last quarter century the population aged 65 and over in the United States has increased until it now numbers between 14 and 15 million persons. This increase in numbers, plus a marked visible variation in the effect of aging, has stimulated the investigation of numerous complex medical and related questions. We are inclined to believe as a result of our studies to date that the lack of preparation for advanced age and the impact of environment are the real causes of degeneration which were formerly attributed to the mere passage of years.

What we should understand is that the solution to these problems will require the effort of many segments of our society in addition to the medical profession. Passage of a law will not wipe out these problems, which are of concern to all of us.

Many of the ills of the aged are the direct result of the inferior role in which this group has been placed. Their experience, wisdom and know-how are being wasted and the resulting lack of meaningful activity has led to emotional frustration and physical breakdown.

This is a trend which has numerous dangerous implications. Basically the problem calls for aggressive leadership at the family and community level to help bring these millions of potentially useful citizens back to their rightful place in society and to give their lives purpose and dignity.

As physicians there is one thing about which we are certain—whether we are dealing with older persons or with any age group of the population—the first fundamental of good medicine is to examine the patient. That, in effect, is what we in American medicine, with the aid of others vitally interested in the health field, have been doing and are doing now. We are trying to find out what the aged really need; what new improvements are succeeding in giving them better health care and how such procedures can be universally applied.

For those of the aged who are in need of custodial care, we seek more realistically priced services in facilities especially designed for them. Too often they are now being treated in hospitals which provide—and charge for—many costly services which the average chronically ill aged patient does not need. These unnecessary services contribute to higher than necessary hospital costs for all of us.

The improvement of custodial care, and the upgrading of nursing home standards have been an objective for many years of the American Medical Association, the American Hospital Association and the American Nursing Home Association. To help meet these needs, testimony was presented on May 20, 1958 before the Subcommittee on Housing of the Senate Committee on Banking and Currency in favor of an amendment to the Federal Housing Administration Act to provide for government insured loans for hospitals and nursing homes.

The American Medical Association also believes that health facilities for the aged could be improved and expanded through greater use of Hill-Burton funds for chronic disease units of general hospitals and nursing homes by abolishing the categories presently contained in that Act. Such an amendment would permit the states to utilize their grants as best suits their individual needs. We made this recommendation in testimony presented on May 6, 1958 to the Subcommittee on Health of the Interstate and Foreign Commerce Committee of the House of Representatives.

Our studies also reveal that many aged patients are remaining in hospitals because there is often nowhere else for them to go—because there is no other local means by which state aid will pay for their care, or because it is the only way they can take advantage of their health insurance. A great many others remain overlong in the hospital because there is no local home-care program that would enable them to be cared for at home, among their family and friends.

A review is currently being made of community efforts to make it possible for many of these people to return to homelike surroundings. By providing the opportunity for the disabled elderly person to maintain a household, such local programs have not only produced the practical result of alleviating a local shortage of hospital beds and reducing the financial burdens on the individual, but they have also restored many patients to a useful life.

We are also attacking the problem of our mentally ill who are over 65. It is here that we confront the basic evil of senility. A number of experiments have demonstrated an almost miraculous recovery from mental stagnation when elderly patients were placed in more familiar surroundings and given new interests and social contacts. Recent isolated studies reveal that as high as 60% of the patients admitted to state mental hospitals did not require psychiatric treatment.

We are attempting to assist in devising a better means of meeting the health care costs for those of the aged who have no income, assets, or other means of support. Often unrealistic state indigent care programs aggravate the problem. States that have not allotted enough money for public assistance medical care are being urged to do so. At present, in excess of 300 million dollars is being spent by federal, state and local governments to provide medical care for public assistance recipients. The aged comprise more nearly ½ of the 5.6 million persons now receiving these public assistance benefits.

We believe that real progress is being made in bringing better health care to the aged and to all others who are ill, and in devising ways to lessen the economic burdens of prolonged illness. The number of persons receiving public assistance is declining. Health insurance coverage is increasing. Persons leaving industry and moving into retirement are bringing with them more and more retirement plans with progressively higher average benefits. Ultimate success in this effort will, however, finally depend upon local interest and action. Individual and community assistance has in the past helped to translate new medical knowledge into better health and greater life expectancy. These same forces which have been effective in the past will best help in solving the problem before us now.

In addition to the numerous and varied medical, scientific and socioeconomic activities being pursued in this field, the physicians of America for some time have recognized the need for additional organizational weapons to attack these problems. For many years the American Medical Association was an active participant in the affairs of the Commission on Chronic Illness. For the past several years the Association has had a Committee on Aging, composed of some of the leading medical authorities in the United States in this field, which has devoted its full effort to this problem. In addition, there are thirty-two Committees on Aging actively at work in the state medical societies. During the past year, the Association has conducted five regional conferences on aging in Seattle, Dallas, Philadelphia, Birmingham and Omaha. A national conference on aging will be sponsored by the American Medical Association in Chicago in September.

The American Hospital Association, likewise, has been conducting research and studying hospital practices with the objective of containing the rising costs of caring for the aged. Blue Shield and Blue Cross plans, as well as the health insurance companies, have stepped up their important contribution to the financing of medical care. They are now engaged in intensive studies designed to create new types of coverage tailored to meet the needs of the aged ill. Pre-retirement financing of health insurance policies with paid-up status at 65; use of life insurance after 65 to pay for health care; the application of deductible and co-insurance to permit coverage of costly illnesses at a low premium rate; and many other approaches are helping to spread health insurance coverage, to an ever increasing degree, among the aged. The nursing home operators are earnestly seeking to improve their standards and to provide a quality service that will bridge the present gap between inexpensive but inadequate home-care and adequate but overexpensive hospital care. Innumerable other instances could be cited of enterprising activity to analyze and meet the problem.

In addition to the independent activities of the American Medical Association and other groups and organizations, there has been a general realization of the need for a combined effort with the help of every independent person, association and agency that has something to contribute. With this in mind and in an effort to provide better coordination and stronger and swifter action in this area, the Joint Council to Improve the Health Care of the Aged has been formed. Some of the most important and respected organizations in the health field are the charter members. They are: the American Medical Association, the American Hospital Association, the American Dental Association and the American Nursing Home Association.

The Joint Council will explore the entire spectrum of problems relating to the aged and aging process. In broad outline the program of the Council will include a coordinated plan of research designed to:

(a) Determine the extent, utilization and availability of facilities, and the economic status and resources of the aged.

(b) Spearhead the expansion and experimentation in all types of voluntary health insurance coverage for the aged.

(c) Encourage the expansion of health care facilities for the aged.

(d) Encourage the development of community health services for the aged.

(e) Urge state and local legislative bodies to provide realistic financial support for medical, hospital and nursing home care of aged public assistance recipients, and

(f) Appraise the problems of the aged who are mentally ill and provide an intensification of education, research and action programs directed toward health problems of the aged at national, state and local levels.

In brief, the Joint Council and its member groups have adopted a positive, optimistic approach in an effort to apply their collective knowledge and skills in the improvement of the health care of the aged, to offer the aged a hope for a better existence and an opportunity to return to the mainstream of community life.

Gentlemen, this concludes my formal statement. It is our sincere recommendation that H. R. 9467, 85th Congress and similar bills not be favorably considered by this Committee.

June 28, 1958

Honorable Wilbur D. Mills
Chairman, Committee on Ways and Means
United States House of Representatives
Washington 25, D. C.

Dear Congressman Mills:

Our testimony presented yesterday was confined to a recital of the position of the American Medical Association concerning H. R. 9467, 85th Congress and similar bills. With your permission we would like to submit this supplementary statement concerning certain of the other measures under consideration by your Committee dealing with the Social Security program.

H. R. 8883, H. R. 9203 and H. R. 9835, 85th Congress would extend Title II of the Social Security Act so as to bring physicians, on a compulsory basis, under the Old Age, Survivors and Disability Insurance program. In as much as the House of Delegates of the American Medical Association has since 1949 consistently opposed such compulsory coverage for physicians, we would again like to register our opposition to these bills. We are not opposed to the voluntary inclusion of physicians under Title II such as proposed by H. R. 4824, 85th Congress.

In order to make individual retirement planning more feasible, our Association has advocated the passage of the Jenkins-Keogh bills, H. R. 9 and H. R. 10, 85th Congress. These bills would allow self-employed persons an adequate and preferable method of providing for their later years.

There are several bills now pending before your Committee which would amend the public assistance provisions of the Social Security Act with respect to the provision of medical care. The American Medical Association opposed the public assistance amendments of 1956 which set up a separate category for medical payments. In a letter to this Committee dated April 24, 1956, we stated that we saw no need for the establishment of a separate public assistance category for the provision of medical care, since the program then in effect was accomplishing, more flexibly, all that the 1956 amendments sought; that this new program would burden the local communities with regulations and restrictions inconsistent with their local problems and customs; and that the establishment of medical payments as a separate category under public assistance would be the forerunner to the establishment of medical care as a categorical benefit under the Old Age, Survivors and Disability Insurance provision of the Social Security Act.

The basic policy of our Association in regard to medical payments under public assistance was adopted by our House of Delegates in December, 1956. It is the belief of the Association that methods and amounts of payments for personal health services should be equitable and determined in the light of local conditions after consultation between the responsible public agency and representatives of the providers of such medical care.

That is to say, the individual states, with the advice of the state medical, hospital, and other professional organizations, should determine how much should be spent on medical services under the public assistance program and how these payments for medical service should be made. We are opposed, therefore, to any of the pending bills which would continue to deprive the states and the local health providers of their traditional right to determine the amount and method of medical care payments under public assistance programs.

There are other bills pending before your Committee which would expand and liberalize the dis-

ability benefit provisions written into Title II of the Social Security Act in 1956. Some of these bills would lower the present age limit of 50 or would do away with a minimum age limit altogether. Some would grant disability payments to dependents of disabled recipients or to their survivors. Some would lessen current coverage requirements for a person to receive disability payments and still others would liberalize the work-test on which the payments are predicated.

The American Medical Association vigorously opposed the enactment of these disability provisions in the 84th Congress. I refer you to our testimony before the Senate Finance Committee on February 23, 1956. We felt that this program was objectionable for medical reasons and that it would discourage many individuals from successfully rehabilitating themselves. We stated that permanent and total disability was impossible to determine in many cases and that this legislation would put tremendous pressure on physicians and the administering agency. Most importantly, we felt that once the payment of disability benefits was made a statutory right under the Social Security Act, it would be impossible to resist the pressures to expand the nature of the benefits and increase the number of beneficiaries.

A review of the administration of the disability program to date and an analysis of the pending bills indicate that our fears were justified. Just as we opposed the original enactment of the disability benefit program, we now oppose any bills which would liberalize it and further extend this medical-type payment program.

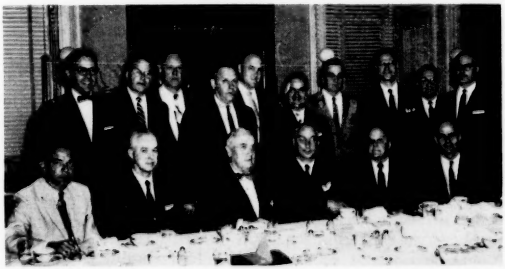
Finally, we would like to comment on H. R. 8883, 85th Congress. In addition to several other proposals, this bill would provide rehabilitation services for disabled workers to be paid for out of the Old Age, Survivors and Disability Insurance Trust Fund. The rehabilitation agencies would be required to enter a contract with the services to be provided determined by the Secretary of Health, Education and Welfare. Under the bill we would have state and private rehabilitation services being supervised by a Federal Government official and being paid for by the Social Security Trust Fund. We oppose this provision of rehabilitation services for the same basic reasons that we oppose the provision of hospital and surgical care under H. R. 9467, 85th Congress.

We wish to thank you and the members of the Committee on Ways and Means for allowing us to present our views on these matters both at the recent hearings and in this letter. If any members of the Committee desire further information concerning our positions on the subjects covered, we would be only too happy to furnish anything we have.

Sincerely yours,
F. J. L. Blasingame, M.D.
General Manager

WISCONSIN CONGRESSIONAL DELEGATION HONORS DR. GUNDERSEN

Dr. Gunnar Gundersen, newly elected President of the American Medical Association, made his first public appearance after the A. M. A. annual convention as a guest of the Wisconsin members of the Senate and House of Representatives. At a breakfast in the Capitol, Dr. Gundersen was praised by members of both parties for the Gundersen family contribution to medicine and public service for over half a century. Representative Withrow said, in introducing the doctor, that three generations of Gundersen doctors had treated him and his family for over 50 years.



Attending the breakfast are seated, left to right, Congressman Byrnes, Dr. Kennard, Senator Wiley, Dr. Gundersen, Congressman Withrow, and Senator Proxmire; standing left to right, Congressmen Tewes and Van Pelt, Attorney Kuehl, Congressmen Johnson, Laird, Zablocki, O'Konski, and Reuss, and Drs. Maxwell and Davis.

Senator Wiley and Representative James Byrnes, leader of the Republican delegation in the House, arranged the affair. It marked the first time the entire Wisconsin delegation had gathered together. Senator Proxmire said he had been greatly impressed by the strength of the A. M. A. in regard to federal legislation.

Dr. Gundersen observed that more good will could be attained in the international field if the United States were to use funds for foreign aid to provide aid to alleviate medical problems abroad.

Others attending the breakfast were Representatives Donald E. Tewes, William K. Van Pelt, Lester R. Johnson, Melvin R. Laird, Clement J. Zablocki, Alvin E. O'Konski, Gardner R. Withrow, and Henry S. Reuss, and Drs. William Kennard, Cyrus Maxwell, and Joseph Davis, and Frank Kuehl of the Washington Office of the A. M. A.

Postgraduate Courses for Physicians

Compiled by the Council on Medical Education and Hospitals for the Period Sept. 1, 1958 to Aug. 31, 1959

The data in the following list of postgraduate courses have been compiled by the staff under the supervision of Dr. Glen R. Shepherd, Assistant Secretary of the Council on Medical Education and Hospitals, with the clerical assistance of Miss Eileen O'Brien. The Council desires to express appreciation to the officers of the medical schools, hospitals, and medical societies who have cooperated in furnishing the information essential to the preparation of this report.

Edward L. Turner, M.D., Secretary
Council on Medical Education and Hospitals

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INTRODUCTION

The fourth annual listing of postgraduate courses in this country for physicians appears in the following pages of THE JOURNAL. This listing is for the period Sept. 1, 1958, to Aug. 31, 1959. The annual list replaces the semiannual lists that appeared previously.

Postgraduate medical education courses consist of planned activities for doctors of medicine intended to refresh practicing physicians in the various aspects of their basic medical education, to provide information on new developments in medicine, and to stimulate further educational efforts by the participants. Such courses are not designed to provide the lengthy intensive education required for specialist training, and thus they usually do not lead either to credit toward graduate degrees or to specialty board certification. These are in the field of graduate medical education and usually consist of residency training or fellowships. Postgraduate courses are shorter than graduate education programs.

This list of postgraduate courses was prepared from the unappraised and unevaluated replies to Council questionnaires by American medical schools, hospitals, and the various national, state, and specialty medical societies. This list is printed simply to provide for those physicians seeking postgraduate courses a point of departure through which further information can be obtained by writing to the institution or organization listed under Location. Inquiries should be made before traveling to any course listed, because dates, time arrangements, and fees are subject to change. Sponsors of courses having numerical limitation of registration must restrict enrollment, often on the basis of order of application. Courses for which there is insufficient advance registration may be canceled. Such inquiry of the sponsor is especially urged about courses scheduled for 1959, on which final information may not have been available to the sponsor at the time this list was prepared.

Though the educational values of medical society meetings and conventions as well as hospital staff and departmental meetings can be very real and worthwhile, such meetings are not usually listed here as postgraduate courses. Lists of meetings are to be found periodically elsewhere in THE JOURNAL.

Many of the courses have co-sponsors to whom specific credit cannot be given because of space limitations. It is expected that the institution or organization sponsoring the course has provided such co-sponsor recognition to its registrants.

Under each category in the following list, the order of arrangement of the courses is alphabetically first by states, second by cities within states, third by the institutions and organizations within the cities, and last by date of course where several courses in that category are offered by the same institution or organization.

Although the list may indicate that a course is designed primarily for specialists in that category, many such courses are open to any physician, so specific inquiry should be made of the institution listed.

One of the categories has a special use in addition to its usual denotation. In the General Practice category are listed those courses having subjects embracing several fields, such as a course on the management of mass casualties or the Summer School of Alcohol Studies.

The Council on Medical Education and Hospitals has studied continuing medical education for several years. Following the 1952-1955 survey, its ad hoc Advisory Committee on Postgraduate Medical Education was appointed and met first in June, 1956. The Committee has considered ways in which the Council can be of greatest assistance in the further development of this part of medical education. As an initial step in such a course of action recommended by the Advisory Committee and endorsed by the Council, the House of Delegates of the American Medical Association adopted in June, 1957, a document entitled "A Guide Regarding Objectives and Basic Principles of Postgraduate Medical Education Programs." This guide should be of interest to all who are active in sponsoring such programs. Copies may be obtained on request to the Council on Medical Education and Hospitals, American Medical Association, 535 N. Dearborn St., Chicago 10.

KEY

Designed For
G—General practitioners
S—Specialists
B—Both
Lim—Enrollment limited to specified number with number stated; i. e., Lim 20, meaning enrollment limited to 20 in the course. If it is repeated, another 20 could be accommodated

Type
IC—Intensive continuous
II—Intensive intermittent
CC—Circuit course
PT—Postgraduate traineeship*
HS—Home study
HS (C)—Home study by correspondence
HS (R)—Home study by radio
O—Other

Time Arrangement
C—Continuous or concentrated (e. g., as every day for five days)
I—Intermittent (e. g., every Thursday for six weeks)

Methods of Education
AV—Audiovisual aids (movies, slides, models)
BR—Bedside rounds
Clin C—Clinical conference
Dem—Demonstrations other than of patients
EPP—Enrolee performs procedure
LC—Live clinic
Lab—Laboratory work (including cadaver dissection and dog surgery where applicable)
Lec—Lecture
O—Open question periods
PD—Patient demonstration
Pan—Panel discussion
PT—Postgraduate traineeship*
R—Radio or telephone
Sem—Seminar
Surg—Operative human surgery
TV—Television

*A postgraduate traineeship for practicing physicians is an individually arranged residency-type postgraduate educational experience in a hospital usually with residents in that field. It differs from a residency or fellowship in the following ways: 1. It is not primarily intended to provide training for entering specialty practice or, in itself, to qualify for specialty board certification. 2. Therefore, it is of shorter duration than a year. 3. It usually does not provide either a stipend or housing, and it may exact a fee from the physicians in such training. 4. It may not (or may) involve direct patient responsibility.

ALLERGY
(See also Pediatrics)

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Allergies	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	Sem, Lec, Pan, AV	6	Spring/59	Same day	C; 1 day	20
The American Academy of Allergy Postgraduate Course	The American Academy of Allergy 756 N. Milwaukee St., Milwaukee; course at a Chicago hotel	S	IC	Lec, Pan, O, AV	14	2/ 7/59	2/ 8/59	C; 2 days	25
Asthma, Hay Fever and Allied Diseases	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 3	PT	Lab, PD, LC, BR, Lec, O, EPP	500	Arranged by appointment	6 mo. later	6 mo. full time	500
Personal Course in Allergy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 3	PT	Lab, PD, LC, BR, Lec, O, EPP	500	Arranged by appointment	6 mo. later	6 mo. full time	500
Asthma, Hay Fever and Allied Diseases	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 3	PT	Lab, PD, LC, BR, Lec, O, EPP	140	1st Monday each mo. Monthly	Saturday of 4th wk.	24 days	200
Personal Course in Allergy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 3	PT	Lab, PD, LC, BR, Lec, O, EPP	140	1st Monday each mo. Monthly by appointment	Saturday of 4th wk.	24 days	200
Allergy for General Physicians and Specialists	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	B	IC	Lec, O, AV	15	4/ 6/59	4/ 8/59	C; 3 days	40
Allergy	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	IC	PD, LC, Sem, Lec, Pan, O, AV	21	3/25/59	3/27/59	C; 3 days	45
Medicine PM 68-Allergy	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G Lim 10	II	LC, Lec, O, AV	26	9/11/58	12/18/58	I; 13 sessions 2 hr. weekly, Thursdays	50
Allergy	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 8	II	Lab, PD, LC, Clin C, Lec, O	16	Arranged		I; 8 sessions 2 hr. weekly, Thursdays	50
5415-A. Allergy	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 12	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV, EPP	105	12/ 1/58	12/19/58	C; 15 days	250
5417-A. Refresher Course in Allergic Conditions	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 30	IC	PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV	21	3/23/59	3/25/59	C; 3 days	55
5432-A. Allergy	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 30	II	PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV	16	4/10/59	5/29/59	I; 8 sessions 2 hr. weekly, Fridays	
Allergy in Theory and Practice	Roosevelt Hospital Institute of Allergy 428 W. 59th St., New York 19	B Lim 40	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, O	40	5/11/59	5/16/59	C; 5 days	100
General Allergy	Albert Einstein Medical Center Northern Division York and Tabor Rds., Philadelphia 41	G Lim 20	II	PD, LC, Sem, Lec	36	10/23/58	1/29/59	I; 12 sessions 3 hrs. weekly, Thursdays	60
Clinical Allergy	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G Lim 10	II	Lec, Pan, AV	Unknown	1/59	5/59	Unknown	25
Clinical Allergy	Montefiore Hospital 5th Ave., Pittsburgh	G Lim 50	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV, EPP	30	4/ 6/59	4/11/59	C; 5 days	60
Allergy—Part I	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.	S	IC	Lab, Lec, O, AV	16	2/59	2/59	C; 3 days	35

ANATOMY

(See also Gynecology, Ophthalmology, Otolaryngology)

Surgical Anatomy—Dissection, Lectures and Demonstrations	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33	G Lim 30	II	Lab, Sem, Lec, Dem	328	9/ 8/58	6/ 4/59	I; 71 sessions 4½ hr. twice weekly, Mondays, Wednesdays	250
Surgical Anatomy—Lectures and Demonstrations	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33	G Lim 15	II	Lec, Pan, Dem	82	9/10/58	6/ 3/59	I; 41 sessions 2 hr. weekly, Wednesdays	100
Surgical Anatomy	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G Lim 30	II	Lab, Lec, O, AV, EPP	20	Fall/58		I; 10 sessions 2 hr.	Unknown
Gross and Applied Anatomy	San Diego County General Hospital North end of Front St., San Diego 3, Calif.	S Lim 20	II	Lab, Lec, O, AV	32	9/58	12/58	I; 16 sessions 2 hr. weekly, Wednesdays	Nil
Neuroanatomy	Program Director, Connecticut Postgraduate Seminar in Psychiatry and Neurology, Connecticut State Hospital, Middletown, Conn.; course at Yale University School of Medicine, New Haven, Conn.	S Lim 40	II	Lec, O	9	9/24/58	11/19/58	I; 9 sessions 1 hr. weekly, Wednesdays	Nil
Anatomy 201—Special Dissections in Anatomy	Assistant Dean of Postgraduate Medical Education Yale University School of Medicine 333 Cedar St., New Haven, Conn.	S Surgery and Surgical Specialties	II	Lab, EPP	Arranged	Arranged			Arranged
Anatomy 202—Demonstration in Anatomy	Assistant Dean of Postgraduate Medical Education Yale University School of Medicine 333 Cedar St., New Haven, Conn.	S Surgery and Surgical Specialties	II	Lab, O, AV	50	9/58	5/59	I; 30 sessions 1½ to 2 hr. weekly, day to be arranged	175
Surgical Anatomy	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B Lim	IC	Lab, Lec	180	3/59	6/59	C; 3 hr. daily	Unknown
Dissection of Female Abdomino-Pelvis	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	S Lim 5	II	Lab, Lec, O, AV, EPP	60	Arranged	4 mo. after beginning	I; 15 sessions 4 hr. weekly, Tuesdays	125
Anatomy for Anesthesiologists	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	S Lim 5	II	Lab, Lec, O, AV	Arranged	9/58	6/59	I; once weekly, hr. and days not determined	50
Surgical Anatomy on the Cadaver and Clinical Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 20	IC	Lab, PD, LC, BR, Clin C, Surg, Lec, O, AV	100	3/ 2/59	3/14/59	C; 13 days	150
Dissection of Lower Extremity for Orthopedic Surgeons	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	S Lim 5	II	Lab, Lec, O, AV, EPP	56	Arranged	14 wk. after beginning	I; 14 sessions 4 hr. weekly, Thursdays	75
Dissection of Spine for Orthopedic Surgeons	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	S Lim 5	II	Lab, Lec, O, AV	56	Arranged	14 wk. after beginning	I; 14 sessions 4 hr. weekly, Thursdays	75
Dissection of Upper Extremity for Orthopedic Surgeons	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	S Lim 5	II	Lab, Lec, O, AV, EPP	56	Arranged	14 wk. after beginning	I; 14 sessions 4 hr. weekly, Thursdays	75
Embryology for Otolaryngologists	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	S Lim 5	II	Lab, Lec, O, AV	16	Arranged Fall	4 wk. after beginning	I; 4 sessions 4 hr. weekly, Mondays	25
Dissection of Male Abdomino-Pelvis	Indiana University School of Medicine 1100 W. Michigan St., Inlianapolis 7	S Lim 5	II	Lab, Lec, O, AV	32	4/27/59	6/15/59	I; 8 sessions 4 hr. weekly, Mondays	125
General Anatomy	University of Maryland School of Medicine Lombard and Greene Sts., Baltimore	S Lim 3	IC or II	Lab, Lec, Pan	Arranged	Arranged	Arranged		Unknown
Anatomy of Head and Neck as Applied to the Ear, Nose and Throat	University of Maryland School of Medicine Lombard and Greene Sts., Baltimore	S Lim 6	II	Lab, Sem, AV, EPP	20	10/58	4/59	I; 10 sessions 2 hr. weekly, Thursdays	25
Clinical Anatomy	University of Maryland School of Medicine 522 W. Lombard St., Baltimore	S Lim 20	II	Lab, Lec	90	1/26/59	5/15/59	I; 30 sessions 3 hr. twice weekly, Mondays, Wednesdays	150
Surgical Anatomy	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15	S Lim 16	IC	Lab, Lec	140	3/ 2/59	4/24/59	C; 40 days	200
Surgical Anatomy of the Head and Neck	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Martland Medical Center, Newark, N. J.	S Lim 25	II	Lab, Lec, O	7½	10/ 3/58	11/ 7/58	I; 5 sessions 1½ hr. weekly, Fridays	75

Key will be found on page 1954.

ANATOMY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Surgical Anatomy of the Chest	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Martland Medical Center, Newark, N. J.	S Lim 20	II	Lab, Lec, O	7½	10/10/58	11/ 7/58	I; 5 sessions 1½ hr. weekly, Fridays	75
Surgical Anatomy of Pelvic and GU Tract	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Martland Medical Center, Newark, N. J.	S Lim 20	II	Lab, Lec	9	10/19/58	12/19/58	I; 6 sessions 1½ hr. weekly, Fridays	100
Surgical Anatomy of the Extremities and Vertebrae for Orthopedic Surgeons	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Martland Medical Center, Newark, N. J.	S Lim 20	II	Lab, Lec, O, EPP	12	1/ 9/59	2/27/59	I; 8 sessions 1½ hr. weekly, Fridays	125
Surgical Anatomy—Dissection of Upper Extremity	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G Lim 20	II	Lab, Sem, EPP	24½	9/16/58	10/28/58	I; 7 sessions 3½ hr. weekly, Tuesdays	100
Surgical Anatomy—Dissection of Head and Neck	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G Lim 20	II	Lab, Sem, EPP	31½	11/ 4/58	1/13/59	I; 9 sessions 3½ hr. weekly, Tuesdays	150
Surgical Anatomy—Dissection of the Thorax	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G Lim 20	II	Lab, Sem, EPP	17½	1/20/59	2/17/59	I; 5 sessions 3½ hr. weekly, Tuesdays	75
Surgical Anatomy—Dissection of Abdomen	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G Lim 20	II	Lab, Sem, EPP	24½	2/24/59	4/ 7/59	I; 7 sessions 3½ hr. weekly, Tuesdays	100
Surgical Anatomy—Dissection of Lower Extremity	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G Lim 20	II	Lab, Sem, EPP	17½	4/15/59	5/12/59	I; 5 sessions 3½ hr. weekly, Tuesdays	75
Surgical Anatomy—Review	Cornell University Medical College 1300 York Ave., New York	S Lim 25	IC	Lab, Lec, O, AV, EPP	180	5/25/59	6/20/59	C; 24 days	300
Anatomy—Surgical (a) (Cadaver demonstration)	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 6	II	Lec, O, AV, EPP	18	Arranged		I; 6 sessions 3 hr. thrice weekly, Mondays, Wednesdays, Fridays	300
Anatomy—Surgical (b) (Cadaver demonstration)	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 8	II	Lec, Pan, O, AV, EPP	18	Arranged		I; 6 sessions 3 hr. thrice weekly, Mondays, Wednesdays, Fridays	300
Anatomy—Surgical (c) (Cadaver demonstration)	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 8	II	Lec, O, AV, EPP	12	Arranged		I; 6 sessions 2 hr. thrice weekly, Mondays, Wednesdays, Fridays	Unknown
Anatomy—Surgical (d) (Cadaver demonstration)	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 8	II	Clin C, Lec, O, AV, EPP	6	Arranged		Unknown	300
556-A. Anatomy of the Head, Neck and Thorax for Otolaryngologists	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 8	IC	Lab, Lec, O, EPP	90	9/15/58	10/24/58	C; 30 days	150
413-A. Surgical Anatomy of the Abdomen	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 12	II	Lab, Sem, Lec, AV, EPP	144	9/22/58	12/12/58	I; 36 sessions 4 hr. thrice weekly, Mondays, Wednesdays, Fridays	100
411-A. Surgical Anatomy of the Head and Neck	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 12	II	Lab, Sem, Lec, AV, EPP	144	9/22/58	12/12/58	I; 36 sessions 4 hr. thrice weekly, Mondays, Wednesdays, Fridays	100
412-A. Surgical Anatomy of the Thorax and its Viscera	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 12	II	Lab, Sem, Lec, AV, EPP	144	9/22/58	12/12/58	I; 36 sessions 4 hr. thrice weekly, Mondays, Wednesdays, Fridays	100
555-A. Anatomy for Orthopedic Surgeons	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 20	IC	Lab, O, EPP	35	1/12/59	1/16/59	C; 5 days	150

414-A. Surgical Anatomy of the Female Pelvis	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 12	II	Lab, Sem, Lec, AV, EPP	144	3/23/59	6/12/59	I; 36 sessions 4 hr. thrice weekly, Mondays, Wednesdays, Fridays	100
415-A. Surgical Anatomy of the Genitourinary System	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 12	II	Lab, Sem, Lec, AV, EPP	144	3/23/59	6/12/59	I; 36 sessions 4 hr. thrice weekly, Mondays, Wednesdays, Fridays	100
416-A. Surgical Anatomy of the Musculoskeletal System	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 12	II	Lab, Sem, Lec, AV, EPP	144	3/23/59	6/12/59	I; 36 sessions 4 hr. thrice weekly, Mondays, Wednesdays, Fridays	100
Anatomy	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	B	IC or II	Lab, EPP	Arranged	Arranged	Arranged		Arranged

ANESTHESIOLOGY

(See also Anatomy, Cardiovascular Disease)

Anesthesiology in General Practice	Lloyd Noland Hospital and Clinic P. O. Box 538, Fairfield, Ala.	G Lim 3	IC or II	PD, LC, BR, Clin C, Surg, Lec, Pan, O, AV, EPP	Full time with night call, or 6 hrs. daily	Arranged		Arranged	Varies
Anesthesiology	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33; course at White Memorial Hospital, Los Angeles 33	G Lim 2	IC	LC, Sem, Lec	765	Unknown Every 6 mo.	6 mo. after starting date	C; 120 days	350
Current Concepts in Anesthesia	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	Sem, Lec, Pan, O, AV	19	8/27/59	8/29/59	C; 3 days	50
Anesthesiology	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	G Lim	PT	LC, Clin C, Sem, Surg, EPP	Varies	Arranged		Arranged	Unknown
Course I—Regional Anesthesia	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 1	IC	Lab, PD, LC, Sem, Surg, Lec, O, EPP	140	1st Monday each mo. Monthly by appointment	Friday of 4th wk.	C; 20 days	300
Course V—Inhalation and Endotracheal Anesthesia	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 5	IC	Lab, PD, LC, Sem, Surg, Lec, O, EPP	140	1st Monday of each mo. By appointment monthly	Friday of 4th wk.	C; 20 days	300
General Anesthesiology Traineeship	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	G	PT	Lab, PD, LC, BR, Sem, Lec, Pan, O, AV, EPP	80, 160 or 320	Each Monday	Varies	14, 28, or 56 days	100, 150, or 200
Anesthesiology for the General Practitioner and the Part-time Anesthesiologist	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	G	IC	Clin C, Lec, Pan, O, AV	14	2/18/59	2/19/59	C; 2 days	25
Postgraduate Traineeship	State University of Iowa Hospitals Iowa City	G Lim 2	PT	PD, Clin C, Sem, O, EPP		Arranged		Arranged	Nil
Anesthesia for the Part-time Anesthetist	State University of Iowa College of Medicine University Hospitals, Iowa City	G	IC	PD, Lec, Pan, O, AV	6	10/ 9/58	10/ 9/58	C; 1 day	15
Clinical Traineeship in Anesthesiology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 1	PT	PD, LC, BR, Clin C, Sem, Lec, O, AV, EPP	Varies	Arranged		14 to 30 days	50 per mo. in state; 100 per mo. out of state
Anesthesiology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	S	IC	PD, Clin C, Lec, Pan, O, AV	21	4/13/59	4/15/59	C; 3 days	40
Anesthesia	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	B Lim 50	IC	Clin C, Sem, Lec, Pan	20	3/ 5/59	3/ 7/59	C; 2½ days	25
Anesthesiology	Eastern Maine General Hospital Bangor, Me.	G Lim 2	PT	PD, LC, BR, Clin C, Sem, Surg, Lec, Pan, O, AV, EPP	Varies	Arranged		Arranged	Nil
Anesthesiology	Central Maine General Hospital 300 Main St., Lewiston, Me.	G Lim	PT	PD, LC, BR, Clin C, Sem, Lec, O, AV, EPP	Varies	Arranged		Arranged	Nil
Postgraduate Lectures in Anesthesiology	Maine Medical Center 22 Bramhall St., Portland, Me.	G	II	Sem, Lec, O, AV	15	10/17/58	5/59	I; 15 sessions 1 hr. each	Nil
Post Graduate Training in Anesthesiology	St. Vincent Hospital 25 Winthrop St., Worcester, Mass.	G Lim 2	PT	PD, BR, Clin C, Lec, Pan, O, EPP	Varies	Arranged		3 to 6 mo.	Nil
Clinical Anesthesiology	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G Lim 6	PT	PD, LC, BR, Clin C, Sem, Lec, EPP	320	1/ 1/59 4/ 1/59 7/ 1/59	3/31/59	90 days	200

Key will be found on page 1954.

ANESTHESIOLOGY—Continued

Title of Course	Location	Designed For	Type	Method of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Anesthesiology	Inquire of: Dr. Curtis W. Caine 4332 Manhattan Rd., Jackson, Miss.; course at Mississippi Baptist, St. Dominic's, and University Hospitals, Jackson, Miss.	G	O	PD, LC, BR, O	Varies	Arranged			Nil
Anesthesiology in General practice	Office of Postgraduate Affairs University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	IC	Sem, Lec, Pan, O, AV	6	5/ 5/59	5/ 5/59	C; 1 day	10
Modern Concepts of Anesthesiology	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Martland Medical Center, Newark, N. J.	S Lim 40	II	Lec, O	15	Unknown		I; 10 sessions 1½ hr. weekly	50
Clinical Anesthesiology	Albany Medical College 47 New Scotland Ave., Albany 8, N.Y.; course at Albany Hospital, Albany, N.Y.	G	PT	PD, Clin C, Sem, Lec, AV, EPP		Arranged	6 mo. later	Arranged	400
Anesthesia	University of Buffalo School of Medicine 3435 Main St., Buffalo	G Lim 12	IC	PD, Sem, Lec, Pan, O, AV	39	4/ 6/59	4/11/59	C; 5½ days	75
Anesthesiology	University of Buffalo School of Medicine 3435 Main St., Buffalo	G Lim 10	IC	PD, LC, Lec, Pan, O, EPP	37½	4/59	4/59	C; 5 days	75
Applied Anesthesiology	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 6	IC	Lab, PD, BR, Lec, O, AV	480	10/ 1/58 4/ 1/59	12/31/58	C; 72 days	300
512-A Regional Anesthesiology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 16	IC	Lab, PD, Lec	42	9/ 8/58 1/12/59 4/13/59	9/13/58	C; 6 days	125
Anesthesiology 2513-A	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 3	IC or PT	Lab, PD, LC, Clin C, Sem, Surg, Lec	Full time	9/15/58	6/15/59	C; 9 mo.	880
510-A Anesthesiology: Endotracheal and Related Methods	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 4	IC	Lab, PD, Clin C, Surg, Lec, EPP	35	9/29/58 1/ 5/59 3/23/59	10/ 3/58	C; 5 days	125
511-A. Anesthesiology	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 3	PT	PD, Clin C, Surg, Lec, EPP	70	9/58	6/59	10 days Any Monday Sept. through June	175
Postgraduate Traineeship in Anesthesiology	North Carolina Memorial Hospital University of North Carolina Chapel Hill, N.C.	G	PT	Lab, Sem, Surg, EPP		Arranged		Arranged	Nil
Anesthesia	Duke Medical Center Durham, N.C.	G	PT	PD, LC, Clin C, Sem, Lec	Varies	Arranged		Arranged	Nil
Postgraduate Course in Obstetric and Gynecologic Anesthesia	Maternity MacDonald House Division of University Hospitals of Cleveland 2065 Adelbert Rd., Cleveland 6	G Lim 1	IC or PT	PD, LC, BR, Clin C, Sem, Surg, Lec, Pan, O, AV, EPP	24	1/ 1/59 7/ 1/59	3 mo. later	C; 90 days	150
The Treatment of Cardiac Emergencies	Ohio State University Neil and 11th Ave., Columbus, O.	G Lim 25	IC	Lab, Clin C, Sem, Lec, O, AV	5	Arranged		C; 1 day	5
Refresher Course in Anesthesiology	Ohio State University Neil and 11th Ave., Columbus, O.	G Lim 25	IC	Lab, PD, LC, Clin C, Sem, Surg, Lec, Pan, O, AV, EPP	27	Arranged		C; 3 days	25
Clinical Anesthesiology for General Practitioners	Ohio State University Neil and 11th Ave., Columbus, O.	G Lim 3	IC	Lab, PD, LC, BR, Clin C, Sem, Surg, Lec, O, EPP	1,375	Arranged	6 mo. later	C; 175 days	Nil
Special Topics in Anesthesiology	Ohio State University Neil and 11th Ave., Columbus, O.	G Lim 3	IC	Lab, PD, LC, BR, Clin C, Sem, Surg, Lec, O, EPP	Varies	Arranged		Arranged	Nil
Clinical General Anesthesia	McKesson Anesthesia Associates 2228 Ashland Ave., Toledo 10, O.; course at various Toledo hospitals	G Lim 3	IC or PT	Lab, PD, Lec, O, EPP	124	Arranged		C; 24 days	250
Anesthesia for the Part-Time Anesthetist	University of Oklahoma Medical Center 800 N. E. 13th St., Oklahoma City 4	G	PT	PD, LC, Clin C, Sem, EPP		Arranged	at least 7 days later		Nil
Recent Advances in the Pharmacological Aspects of Anesthesia	University of Pennsylvania Graduate School of Medicine Houston Hall 3450 Spruce St., Philadelphia	S Lim 75	IC	Lec, Pan, O	15	2/ 9/59	2/11/59	C; 3 days	75
Postgraduate Refresher Course in Anesthesiology	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at Scott and White Memorial Hospitals, Scott, Sherwood and Brindley Foundation, Temple, Tex.	G Lim 1	PT	PD, BR, Sem, Surg, Lec, EPP	176	1st Monday of each mo. September through May	Last Saturday of mo.	24 days	25

Fourth Annual Course in Anesthesiology	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.: course at The University of Texas M.D. Anderson Hospital Houston, Tex.	B Lim 270	IC	Lab, Lec, Pan, O, AV	20	2/18/59	2/20/59	C; 3 days	45
Postgraduate Traineeship in Anesthesiology	Division of Anesthesiology, University of Utah College of Medicine 2033 S. State St., Salt Lake City, Utah	G	PT	PT	Arranged	Arranged	1 wk. to 1 yr. later		25 per wk.; 50 per mo.
Fourth Postgraduate Course in Anesthesiology	Division of Anesthesiology, University of Utah College of Medicine, 2033 S. State St., Salt Lake City, Utah	G Lim 26	IC	PD, Clin C, Surg, Lec, Pan, O, AV, EPP	36	2/ 9/59	2/12/59	C; 4 days	40
Postgraduate Course in Anesthesiology	University of Virginia Hospital, Charlottesville, Va.	G Lim 2	PT	PD, BR, Clin C, Sem, EPP		Arranged		14 days or more	Nil
Regional Anesthesia; Obstetrical Anesthesia and Surgical Anesthesia	Tacoma General Hospital and Pierce County Hospital Tacoma, Wash.	B	PT	PD, LC, BR, Clin C, Sem, Lec, AV, EPP	44 wk.	Arranged	As many wk. later as desired		100
Recent Advances in Anesthesia and Resuscitation	Assistant to the Dean University of Wisconsin Medical School 418 N. Randall Ave., Madison 6, Wis.	G Lim 100	IC	PD, Lec, Pan, O, AV	11	10/10/58	10/11/58	C; 1½ days	20

BASIC SCIENCES

(See also Anatomy, Clinical Pathology, Internal Medicine, Pathology, Radisotopes, Radiology)

Surgical Physiology	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33	G Lim 20	II	Sem, Pan	72	9/ 4/58	6/ 4/59	I: 36 sessions 2 hr. weekly, Thursdays	75
Neurophysiology and Neurochemistry	Program Director, Connecticut Postgraduate Seminar in Psychiatry and Neurology Connecticut State Hospital, Middletown, Conn.; course at Yale University School of Medicine, New Haven, Conn.	S Lim 40	II	Lec, O	11	10/ 1/58	11/19/58	I: 11 sessions 1 hr. weekly, Wednesdays	Nil
Microbiology 210—Diagnostic Medical Mycology	Assistant Dean of Postgraduate Medical Education Yale University School of Medicine 333 Cedar St., New Haven, Conn.	S Lim	IC	Lab, Sem, O, EPP	150	Arranged		C; 25 days	100
Biostatistics	Department of Army Office of the Surgeon General Personnel and Training Division Washington 25, D. C.; course at Walter Reed Army Institute of Research, Washington 12, D. C.	S Restricted to military personnel Lim 20	IC	Lec, O, EPP	96	10/10/58	10/24/58	C; 14 days	Nil
Basic Physiology	St. Elizabeth's Hospital 1431 N. Claremont Ave., Chicago	G	II	Lec	24	10/ 1/58	3/59	I; 24 sessions 1 hr. weekly, Wednesdays	Unknown
Clinical Traineeship in Microbiology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 1	PT	Lab, Clin C, Sem, Lec, O, AV, EPP		Arranged	1 mo. later	30 days	50 in state; 100 out of state
Histochemistry	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	S Lim 18 first wk. Lim 24 second wk.	IC	Lab, Sem, Lec, Pan, O, AV, EPP	84	6/ 8/59	6/20/59	C; 12 days	75 one wk. 125 both wk.
Basic Sciences as Applied to Practice of Medicine	University of Maryland School of Medicine 522 W. Lombard St., Baltimore	B Lim 100	II	Lec	42	1/ 7/59	5/27/59	I; 21 sessions 2 hr. weekly, Wednesdays	50
Workship on Clinical Chemistry—In-born Errors of Metabolism	U. S. Naval Medical School National Naval Medical Center, Bethesda 14, Md.	S Lim 120	IC	Lab, Sem, Lec, AV, EPP	16	12/58	12/58	C; 2 days	20
Modern Research Methods in Biology and Medicine	Director of the Summer Session Massachusetts Institute of Technology 77 Massachusetts Ave., Cambridge 39, Mass.	S Lim 75	IC	Lab, Lec	50	Summer/59		C; 10 days	Unknown
Basic Sciences and their Clinical Application	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	S Lim 40	PT	Lab, PD, LC, Clin C, Lec, Pan, O		9/29/58	6/ 5/59	9 mo.	500
Applied Physiology	Seton Hall College of Medicine and Dentistry, Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Mountainside Hospital, Montclair, N. J.	G Lim 40	II	Lec, O, AV	30	10/ 1/58	2/25/59	I; 20 sessions 1½ hr. weekly, Wednesdays	100

Key will be found on page 1954.

BASIC SCIENCES—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Physiology PM 33-Gastrointestinal	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	II	Sem, O, AV	60	10/58	5/59	I: 1 hr. twice weekly	100
Physiology PM 32-Normal and Pathological Physiology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	II	Lec, O, AV	52	10/ 1/58	4/59	I: 26 sessions 2 hr. weekly, Wednesdays	150
Physiology PM 30-Digestive Tract	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	II	Lec, O, AV	36	1/ 7/59	5/ 6/59	I: 18 sessions 2 hr. weekly, Wednesdays	100
555-A. Electronics for Physicians	New York University Post-Graduate Medical School 550 First Ave, New York 16	G Lim 30	II	Lec, O, AV	15	9/ 2/58	11/11/58	I: 10 sessions 1½ hr. weekly, Tuesdays	75
544-A. Normal and Pathological Physiology: Functional and Chemical Aspects	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	IC	PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV	70	9/15/58	9/26/58	C: 10 days	125
460-A. Biochemistry and Physiology in Disease: Laboratory Diagnosis	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 30	II	PD, Clin C, Lec, O	16	9/30/58	11/25/58	I: 8 sessions 2 hr. weekly, Tuesdays	50
614-A. Neuroanatomy and Neurophysiology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 30	II	Lab, Lec	126	9/15/58	12/ 5/58	I: 36 sessions 3½ hr. thrice weekly, Mondays, Wednesdays, Fridays	350
461-A. Clinical Physiology: The Application of Basic Physiology to Diagnostic and Therapeutic Problems	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 35	II	Clin C, Sem, Lec, O, AV	16	1/ 8/59	2/26/59	I: 8 sessions 2 hr. weekly, Thursdays	50
5426-A. Normal and Pathological Physiology: Functional and Chemical Aspects	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	II	PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV	16	4/ 8/59	5/27/59	I: 8 sessions 2 hr. weekly, Wednesdays	60
Heterologous Transplantation of Human Tumors and other Tissues	Sloan-Kettering Institute 410 E. 68th St., New York	S Lim 25	IC	Lab, Sem, Lec, Pan, O, EPP	24	10/ 7/58 3/10/59	10/ 9/58	C: 3 days	Nil
Correlated Clinical Science Course	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	IC	Lec, O, AV	160	9/23/58	1/24/59	C: 4 mo.	250

CARDIOVASCULAR DISEASE

(See also Anesthesiology, Electrocardiography, Internal Medicine, Pediatrics, Peripheral Vascular Disease, Radiology, Surgery)

Cardiovascular Symposium	Fresno County Heart Association 329 N. Van Ness, Fresno, Cal.; course at Hotel Californian or Motel Hacienda, Fresno, Calif.	G	IC	Sem, Lec, Pan, O, AV	8	1/59	1/59	C: 1 day	12.50
Cardiac Resuscitation	Los Angeles County Heart Association 660 S. Western Ave., Los Angeles 5; course at University of Southern California School of Medicine, Los Angeles 33	G Lim 8	IC	LC, EPP	2	9/3/58 each Wednesday	9/3/58	C: 1 day	30
Pathological Physiology of the Cardiovascular System	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G Lim 25	II	Sem, Lec, Pan, O, AV	20	Fall/58		I: 10 sessions 2 hr. weekly, Mondays	60
Selected Topics in the Pathological Physiology of the Cardiovascular System	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G Lim 25	II	Sem, Lec, Pan, O, AV	20	10/6/58	12/8/58	I: 10 sessions 2 hr. weekly, Mondays	60
873—Cardiac Resuscitation	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33	B Lim 5	II	Lab, Lec, EPP	2	continuous weekly		I: 1 session 2 hr. weekly, Wednesdays	30 practicing physicians; Nil residents, interns, Armed Forces
852—Cardiac Diagnosis	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33	G Lim 10	II	PD, LC, BR	24	Spring/59		I: 12 sessions 2 hr. weekly, Wednesdays	65

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Symposium of Cardiovascular Disease	University of California Medical Extension San Francisco; course at Odd Fellows Hall, Santa Rosa, Calif.	G Lim 85	IC	Lec	9	11/12/58	11/12/58	C; 1 day	12.50
Third Annual Post Graduate Symposium on Heart Disease	Santa Clara and San Mateo County Heart Associations 181 2nd Ave., San Mateo, Calif.	G	IC	Sem, Lec, Pan, O, AV	6	Unknown		C; 1 day	5
Symposium on Heart Disease	Orange County Heart Association P. O. Box 1704, Santa Ana, Calif.	G	IC	Lec, Pan, O, AV	8-10	Spring/59		C; 1 day	12.50
Annual Symposium on Heart Disease	Santa Barbara County Heart Association 18 La Arcada Court Santa Barbara, Calif.; course at Biltmore Hotel, Santa Barbara, Calif.	B Lim 100	IC	Sem, Lec, Pan, O, AV	8	11/ 1/58	11/ 1/58	C; 1 day	20
Cardiac Physiology in Relation to Cardiac Disease	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	II	Sem, Lec		4/59	6/59	I; once weekly for 12 wk.	10
8th Annual Western Cardiac Conference	Office of Postgraduate Medical Education University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	IC	PD, Lec, Pan, O, AV	40	8/59	8/59	C; 5 days	20
Seminar on Cardiovascular Diseases	Northeast Florida Heart Association 425 W. Duval St., Jacksonville, Fla.	B	IC	Clin C, Sem, Lec, Pan, O, AV	15	2/59		C; 2½ days	10
Cardiac Resuscitation	Postgraduate Education Emory University School of Medicine 69 Butler St., S. E., Atlanta, Ga.	G	IC	PD, Sem, Lec, Pan, O, AV	10	10/ 3/58	10/ 3/58	C; 1 day	20
Treatment of Heart Disease	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	G	IC	Lec, Pan, O, AV	7	4/29/59	4/29/59	C; 1 day	10
Cardiac Auscultation	State University of Iowa College of Medicine University Hospitals, Iowa City	S Lim 30	IC	PD, Lec, Pan, O, AV	12	4/ 8/59	4/ 9/59	C; 2 days	15
Cardiac Auscultation	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 30	IC	PD, Lec, O, AV, EPP	14	10/13/58 3/23/59	10/14/58	C; 2 days	50
Clinical Traineeship in Cardiovascular Disease	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 2	PT	Lab, PD, LC, BR, Clin C, Sem, Lec, O, AV, EPP	120	2/ 2/59 3/ 2/59	2/28/59	Approximately 30 days	200
Annual Scientific Sessions On Heart Disease	Heart Association of Maryland 1140 Mondawmin Concourse, Baltimore 15; course at University of Maryland Hospital, Baltimore	S	IC	Lec, Pan, O, AV	7	9/58	9/58	C; 1 day	Unknown
First Postgraduate Course in Cardiology—Surgery and Current Concepts	Heart Association of Maryland 1140 Mondawmin Concourse, Baltimore 15; course at Johns Hopkins Hospital, Baltimore	G	IC	PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV	20	1/15/59	1/17/59	C; 3 days	Unknown
Cardiovascular Disease	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Massachusetts General Hospital, Boston 14	S Lim 12	IC	Lab, PD, LC, BR, Clin C, Lec, O	35-40 hr./wk.	10/ 1/58	5/31/59	C; 8 mo.	800
Cardiology 1	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Beth Israel Hospital, Boston 15	G Lim 12	IC	Lab, PD, LC, BR, Clin C, Lec, O	450	2/ 2/59	4/30/59	C; 65 days	500
Diseases of the Heart	University of Michigan Medical School, Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G Lim 60	IC	PD, Clin C, Lec, Pan, O, AV	35	4/ 6/59	4/10/59	C; 5 days	50
Cardiovascular Diseases for General Physicians	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	IC	Lec, O, AV	15	2/23/59	2/25/59	C; 3 days	40
Cardiovascular Seminar	University of Mississippi Medical Center, Secretary, Postgraduate Education Committee 2500 N. State St., Jackson, Miss.	B Lim 150	IC	PD, Sem, Lec, Pan, O, AV	20	4/ 1/59	4/ 3/59	C; 3 days	10
Cardiac Auscultation	St. Louis University School of Medicine 1402 S. Grand Blvd., St. Louis 4; course at Firmin Desloge Hospital, St. Louis 4	G Lim 35	IC	PD, Sem, Lec, Pan, O, AV, EPP		Arranged		Arranged	Unknown
Advanced Clinical Electrocardiography	St. Michael's Hospital 306 High St., Newark, N. J.	G Lim 50	II	Lec	16	9/58	2/59	I; 16 sessions 1 hr. biweekly, Wednesdays	Unknown
Recent Advances in Clinical Cardiology	St. Michael's Hospital 306 High St., Newark, N. J.	G Lim 50	II	PD, LC, BR, Clin C, Lec, O, AV	16	9/58	2/59	I; 8 sessions 2 hr. biweekly, Wednesdays	25
Applied Cardiology—Recent Advances	Seton Hall College of Medicine and Dentistry, Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Elizabeth General Hospital, Elizabeth, N. J.	G Lim 45	II	Lec, O, AV	15	9/25/58	4/23/59	I; 10 sessions 1½ hr. weekly, Thursdays	Unknown

Key will be found on page 1954.

CARDIOVASCULAR DISEASE—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Cardiac Resuscitation Course	St. Michael's Hospital 306 High St., Newark, N. J.	S Lim 12	IC	Lab, Lec, O, AV, EPP	7	10/58 repeated one Saturday of each mo. for 8 mo.	5/59	C; 1 day	25
Modern Concepts in Cardiology	Seton Hall College of Medicine and Dentistry, Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at St. Francis Hospital, Trenton, N. J.	G Lim 45	II	Lec, O, AV	15	Unknown		I; 10 sessions 1½ hr. weekly	50
Selected Cardiovascular Disorders	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	IC	PD, LC, Clin C, Sem, O, AV	6	11/6/58	11/6/58	C; 1 day	12
Recent Advances in Cardiovascular Diseases	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	IC	PD, LC, Clin C, Sem, O, AV	6	2/ 5/59	2/ 5/59	C; 1 day	12
Medicine PM 64-Surgical Treatment of Heart Diseases	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	II	Clin C, Sem, Lec, O, AV	66½	9/23/58 2/ 3/59	1/27/59	I; 19 sessions 3½ hr. weekly, Tuesdays	150
Medicine PM 60-Cardiology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	II	Lab, Lec, O, AV	96	9/25/58 2/ 5/59	1/29/59	I; 16 sessions 6 hr. weekly, Thursdays	150
Medicine PM 62-Cardiology II	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	II	PD, Lec, O, AV	56	9/25/58 2/ 5/59	1/29/59	I; 16 sessions 3½ hr. weekly, Thursdays	150
Medicine PM 63-Cardiology III	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G Lim 20	II	Sem, Lec, O, AV	56	9/25/58 2/ 5/59	1/29/59	I; 16 sessions 3½ hr. weekly, Thursdays	150
Medicine PM 29-Clinical Cardiology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	II	PD, LC, Lec, O, AV	20	10/14/58 2/ 3/59	12/16/58	I; 10 sessions 2 hr. weekly, Tuesdays	60
Medicine PM 31-Recent Advances in Cardiovascular Disease	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	IC	PD, Lec	30	1/26/59	2/ 6/59	C; 10 days	75
Medicine PM 48-Heart Disease and Circulatory Dynamics	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	II	PD, LC, BR, Lec, O, AV, EPP	20	2/17/59	4/21/59	I; 10 sessions 2 hr. weekly, Tuesdays	50
Clinical Cardiology	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Beth-El Hospital, Brooklyn, N. Y.	G Lim 6	II	Lec, AV	18	4/ 8/59	5/21/59	I; 12 sessions 1½ hr. twice weekly, Wednesdays, Fridays	30
Cardiac Surgery—Recent Advances	New York State Heart Assembly 105 E. 22nd St., New York 10; course at Hotel Sheraton, Rochester, N. Y.	G	IC	Lec, Pan, O, AV	6	3/19/59	3/19/59	C; 1 day	Nil
546-A Modern Methods in the Recognition and Treatment of Heart Disease	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 40	II	PD, Clin C, Lec, O, AV	16	10/16/58	12/11/58	I; 8 sessions 2 hr. weekly, Thursdays	55
547-A. Diagnostic Cardiac Auscultation	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 40	IC	Lab, PD, Lec, O, AV	21	10/22/58 2/26/59	10/24/58	C; 3 days	60
5416-A. Modern Trends in The Diagnosis and Treatment of Congenital Heart Disease	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	IC	PD, Lec, AV	21	2/ 4/59	2/ 6/59	C; 3 days	55
5418-A. Cardiac Roentgenology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 40	IC	Lab, PD, Lec, O, AV	14	4/ 3/59	4/ 4/59	C; 2 days	40
5430-A. Cardiology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 40	II	PD, Lec, AV	24	4/ 9/59	5/28/59	I; 8 sessions 3 hr. weekly, Thursdays	85
5433-A. Modern Concepts in the Diagnosis and Treatment of Heart Disease	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 60	IC	Lec, Pan, O	42	5/11/59	5/16/59	C; 6 days	100

Cardiovascular Diseases	Rochester General Hospital 50 W. Main St., Rochester, N. Y.	G	II	PD, Clin C, Lec, Pan, O, AV	16	9/11/58	11/6/58	I; 8 sessions 2 hr. weekly, Thursdays	20
Seminars on Heart Disease	St. Francis Hospital and Sanatorium Roslyn, N. Y.	G Lim 75	II	Sem, Lec, O	8	9/58	5/59	I; 4 sessions 2 hr. bi-monthly, Thursdays	Nil
Postgraduate Course in Cardiology	St. Francis Hospital and Sanatorium Roslyn, N. Y.	G Lim 60	IC	PD, Sem, Surg, Lec, Pan, O, AV, TV	82	4/13/59	4/25/59	C; 12 days	Unknown
Congenital Heart Disease	American College of Physicians 4200 Pine St., Philadelphia 4; course at The Johns Hopkins Hospital, Baltimore	S	IC	PD, Clin C, Lec, Pan, O, AV	35-40	11/17/58	11/21/58	C; 5 days	30 A.C.P. members; 60 Non-members
Recent Advances in Cardiovascular Disease	American College of Physicians 4200 Pine St., Philadelphia 4; course at Mount Sinai Hospital, New York	S	IC	Lec, Pan, O, AV	35-40	2/ 9/59	2/13/59	C; 5 days	30 A.C.P. members; 60 Non-members
1959 Cardiologic Sessions for Practicing Physicians	American Heart Association 44 E. 23 St., New York; course at Philadelphia Trade and Convention Center, Philadelphia	S	IC	Lec, Pan	7	10/23/58	10/23/58	C; 1 day	Nil for members
Postgraduate Cardiology Course No. 1	Hahnemann Medical College and Hospital 235 N. Broad St., Philadelphia	G Lim 50	II	PD, Lec, O, AV	90	10/58	5/59	I; 30 sessions 3 hr. weekly, Thursdays	150
Postgraduate Cardiology Course No. 2—Electrocardiography, X-Ray, Auscultation	Hahnemann Medical College and Hospital 235 N. Broad St., Philadelphia	G Lim 20	II	PD, Clin C, Lec, O, AV	45	10/58	5/59	I; 30 sessions 1½ hr. weekly, Thursdays	150
Cardiac Arrhythmias	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G Lim 40	IC	Unknown	Unknown	Fall/58	Unknown	Continuous	75
The Newer Advances in the Hypertensive Management of the Cardiac Patient	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at City Health Auditorium—City Health Building, Austin, Tex.	G Lim 150	IC	Lec, Pan, AV	15	9/16/58	9/17/58	C; 2 days	30
Cardiology	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at Turner Home, El Paso, Tex.	G	IC	Lec, O, AV	7	10/11/58	10/11/58	C; 1 day	10
CLINICAL PATHOLOGY (See also Ophthalmology)									
Refresher Course for Laboratory Medical Officers	Department of the Army Office of the Surgeon General Personnel and Training Division Washington 25, D. C.; course at Walter Reed Army Institute of Research, Washington 12, D.C.	S Restricted to military personnel Lim 20	IC	Lab, Sem, Lec, Pan, O, AV, EPP	45	2/ 9/59	2/14/59	C; 6 days	Nil
Bacteriophage Typing of Staphylococci (8.50)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's doing epidem. and research on Staph. Lim 2	IC	Lab, EPP	80	Arranged		C; 10 days	Nil
Laboratory Methods in the Diagnosis of Leptospirosis (8.53)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 2	IC	Lab, EPP	40-160	Arranged		C; 5 to 20 days	Nil
Laboratory Methods in the Diagnosis of Malaria (8.05)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 2	IC	Lab, EPP	80	Arranged		C; 10 days	Nil
Phage Typing of Salmonella Typhosa (8.52)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 2	IC	Lab, EPP	40	Arranged		C; 5 days	Nil
Serologic Differentiation of Streptococci (8.54)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 2	IC	Lab, EPP	80	Arranged		C; 10 days	Nil
Special Problems in Enteric Bacteriology (8.51)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 3	IC	Lab, EPP	80	Arranged		C; 10 days	Nil

Key will be found on page 1954.

CLINICAL PATHOLOGY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Special Training in Virus Techniques (8.21)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.; course at Communicable Disease Center, U.S.P.H.S., Virus and Rickettsia Laboratories, Montgomery, Ala.	Lab Technicians but open to MD's Lim 4	IC	Lab, EPP	80-160	Arranged		C; 10 to 20 days	Nil
Typing of Corynebacterium Diphtheriae (8.42)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 2	IC	Lab, EPP	40	Arranged		C; 5 days	Nil
Laboratory Methods in the Diagnosis of Intestinal Parasitic Diseases (8.00)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 20	IC	Lab, Lec, O, AV, EPP	160	9/15/58	10/10/58	C; 20 days	Nil
Laboratory Methods in the Diagnosis of Rabies (8.26)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 15	IC	Lab, Lec, O, AV, EPP	40	10/ 6/58 1/12/59	10/10/58	C; 5 days	Nil
Laboratory Methods in the Diagnosis of Blood Parasitic Diseases (8.01)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 20	IC	Lab, Lec, O, AV, EPP	120	10/13/58	10/31/58	C; 15 days	Nil
Laboratory Methods in the Diagnosis of Viral and Rickettsial Diseases (8.20)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.; course at Communicable Disease Center, U.S.P.H.S., Virus and Rickettsia Laboratories, Montgomery, Ala.	Lab Technicians but open to MD's Lim 12	IC	Lab, Lec, O, AV, EPP	80	10/13/58 3/ 9/59	10/24/58	C; 10 days	Nil
Laboratory Diagnosis of Viral and Rickettsial Diseases (8.20)	Communicable Disease Center, Laboratory Training Services P. O. Box 185, Chamblee, Ga.; course at CDC, Virus & Rickettsia Section, Montgomery, Ala.	G Lim 16	IC	Lab, Sem, Lec, O, AV, EPP	108	10/13/58	10/24/58	C; 12 days	Nil
Laboratory Methods in the Diagnosis of Tuberculosis (8.55)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 15	IC	Lab, Lec, O, AV, EPP	80	10/20/58 1/26/59	10/31/58	C; 10 days	Nil
Laboratory Methods in Medical Mycology (8.15)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 22	IC	Lab, Lec, O, AV, EPP	160	1/ 5/59	1/30/59	C; 20 days	Nil
Laboratory Methods in the Study of Pulmonary Mycoses (8.17)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 22	IC	Lab, Lec, O, AV, EPP	80	2/ 9/59	2/20/59	C; 10 days	Nil
Serologic Methods in Microbiology (8.41)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 10	IC	Lab, Lec, O, AV, EPP	120	3/16/59	4/ 3/59	C; 15 days	Nil
Laboratory Methods in the Diagnosis of Bacterial Diseases (8.40)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 20	IC	Lab, Lec, O, AV, EPP	80	3/ 2/59	3/13/59	C; 10 days	Nil
Laboratory Methods in the Diagnosis of Bacterial Diseases (8.41)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 20	IC	Lab, Lec, O, AV, EPP	80	3/16/59	3/27/59	C; 10 days	Nil
Laboratory Methods in the Diagnosis of Enteric Bacterial Diseases (8.50)	Communicable Disease Center U.S.P.H.S. P. O. Box 185, Chamblee, Ga.	Lab Technicians but open to MD's Lim 20	IC	Lab, Lec, O, AV, EPP	80	3/30/59	4/10/59	C; 10 days	Nil
DERMATOLOGY									
Dermatology for the General Practitioner ‡843	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33	G	IC	Pd, LC, Lec, Pan, O	23	Spring/59		C; 3 days	37
Postgraduate Clinics in Dermatology	University of California Medical Center Second and Parnassus Ave., San Francisco	G Lim 60	IC	PD, Lec, Pan, O, AV	14	1/16/59	1/17/59	C; 2 days	40
Dermatology for General Practitioners	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	IC	PD, Lec, Pan, O, AV	20	7/59	7/59	C; 3 days	30
Clinical Dermatology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 9	PT	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, O	120	Arranged by appointment	4 wk. later	24 days	125

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Course II in Dermatology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 15	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, O	60	11/ 3/58 5/ 4/59	11/14/58	C; 12 days	100
Dermatology and Syphilology I	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Massachusetts General Hospital, Boston	S Lim 6	IC	Lab, PD, LC, BR, Clin C, Sem, Lec	35-40 hr. wk.	10/ 1/58	9/30/59	C; 11 mo.	800
Dermatology for General Physicians	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	IC	Lec, O, AV	15	10/23/58	10/25/58	C; 3 days	40
Dermatopathology	Passaic General Hospital 350 Blvd., Passaic, N.J.	B	II	Lab, Lec, O, AV	20	9/58	6/59	I; 10 sessions 2 hr. once a mo., Sundays	20
Dermatology PM 60	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	II	Lab, PD, Lec, O, AV, EPP	18	1/ 5/59	3/ 2/59	I; 9 sessions 2 hr. weekly, Mondays	40
521-A. Comprehensive Review in Dermatologic Histopathology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 15	IC	Lab, Sem, Surg, Lec, Pan, O, AV	35	9/ 8/58	9/12/58	C; 5 days	100
524-A. Dermatology and Syphilology for Pediatricians	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 30	IC	PD, LC, BR, Clin C, Sem, Surg, Lec, Pan, O, AV	35	10/ 6/58	10/10/58	C; 5 days	100
522-A. Seminar in Dermatology and Syphilology for General Physicians	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 30	IC	PD, LC, Clin C, Sem, Surg, Lec, Pan, O, AV	35	2/16/59	2/20/59	C; 5 days	100
523-A. Symposium on Dermatology and Syphilology for Dermatologists	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 30	IC	PD, LC, BR, Clin C, Sem, Surg, Lec, Pan, O, AV	35	5/18/59	5/22/59	C; 5 days	125
Dermatology	Albert Einstein Medical Center Northern Division York and Tabor Rds., Philadelphia 41	G Lim 5	II	PD, LC, Surg, O, EPP	30	10/ 9/58	12/18/58	I; 10 sessions 2 hr. weekly, Thursdays	35
Dermatology for Medical Practitioners	Skin and Cancer Unit of Temple University Medical Center 804 Pine St., Philadelphia 7	G Lim 20	II	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV, EPP	30	10/28/58	11/25/58	I; 10 sessions 3 hr. weekly, Tuesdays	100
Postgraduate Course in Dermatologic Pathology	Skin and Cancer Unit of Temple University Medical Center 804 Pine St., Philadelphia 7	S Lim 20	IC	Lab, Clin C, Sem, Lec, O, AV, EPP	40	2/23/59	2/27/59	C; 5 days	100
Postgraduate Course in Pediatric Dermatology	Skin and Cancer Unit of Temple University Medical Center 804 Pine St., Philadelphia 7	S Lim 20	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, AV	40	4/27/59	5/ 1/59	C; 5 days	100
Dermatology for the Internist and General Practitioner	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	B	II	Lec, O, AV	15	1/59	4/59	I; Unknown	25

ELECTROCARDIOGRAPHY

(See also Cardiovascular Disease, Internal Medicine)

835—Basic Home Course in Electrocardiography	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33	G	HS (C)	HS (C)	52	9/29/58 12/ 1/58			100
836—Advanced Home Course in Electrocardiography	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33	G	HS (C)	HS (C)	52	9/29/58 12/ 1/58			85
Fundamentals of Electrocardiography	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	G	II	Lec		9/58	12/58	I; once weekly for 11 wk.	10
Basic Electrocardiography	Memorial Hospital 1501 Van Buren St., Wilmington 6, Del.	G	II	Lec	12	1/59	4/59	I; 12 sessions 1 hr. weekly, Wednesdays	Nil
Part I. Spatial Vector Electrocardiography; Part II. Arrhythmias	Georgetown University Medical School Washington 7, D.C.	G Lim 250	II	PD, LC, Clin C, Lec, O, AV	22½	2/ 2/59	4/ 9/59	I; 15 sessions 1½ hr. twice weekly, Mondays Thursdays	Nil
1) Basic Electrocardiography; 2) Electrocardiogram of Myocardial Infarction	Mt. Sinai Hospital of Greater Miami 4300 Alton Rd., Miami Beach 40, Fla.	G Lim 30	IC	Lec	24	9/29/58	12/19/58	I; 24 sessions 1 hr. weekly, Mondays	25
Electrocardiography and Heart Disease	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 30	IC	Lab, PD, LC, BR, Lec, O, AV, EPP	70	10/ 6/58 3/16/59	10/17/58	C; 11 days	150
One Week Advanced Course in Electrocardiography	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	S Lim 30	IC	Lab, Lec, AV, EPP	40	6/15/59	6/20/59	C; 5 days	100
Electrocardiographic Interpretation	Michael Reese Hospital, Cardiovascular Dept. 29th St. and Ellis Ave., Chicago	G	IC	Sem, Lec, O, EPP	80	8/18/58	8/30/58	C; 12 days	150

Key will be found on page 1954.

ELECTROCARDIOGRAPHY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Interpretation of Complex Arrhythmias	Michael Reese Hospital, Cardiovascular Dept. 29th St. and Ellis Ave., Chicago	G Lim 20	IC	Sem, O, AV, EPP	30	12/ 8/58	12/12/58	C; 5 days	100
Basic Electrocardiography	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	G Lim 30	IC	Lec, Pan, O, AV	24	9/17/58	9/19/58	C; 3 days	30
Interpretation of Electrocardiograms—I	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	HS	HS (C), EPP	13	10/ 3/58 3/27/59	3/27/59	26 weekly lessons	25
Interpretation of Electrocardiograms—II	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	HS	HS (C), EPP	13	10/30/58 4/23/59	4/23/59	26 weekly lessons	17
Electrocardiography	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	IC	PD, Sem, Lec, Pan, O, AV	14	2/23/59	2/24/59	C; 2 days	30
Medicine—Electrocardiography	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	B Lim 50	IC	Lab, Sem, Lec	80	12/ 1/58	12/12/58	C; 10 days	100
Electrocardiography and Vectoreardiography	Heart Station, Prince Georges General Hospital Cheverly, Md.	G Lim 15	II	Lab, Clin C, Sem, Lec, O, EPP	35	10/31/58 Additional dates by arrangement	1/30/59	I; 18 to 20 sessions, 2 hr. weekly, Fridays	35
Practical Electrocardiography Course	Beth Israel Hospital 330 Brookline Ave., Boston	G Lim 35	II	Clin C, Lec, Pan, O, AV	30	10/ 1/58 3/ 4/59	12/10/58	I; 10 sessions 3 hr. weekly, Wednesdays	100
Practical Electrocardiography Course	Beth Israel Hospital 330 Brookline Ave., Boston	G Lim 35	IC	Clin C, Lec, Pan, O, AV	30	11/ 3/58 4/20/59	11/ 7/58	C; 5 days	100
Advanced Clinical Electrocardiography	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Peter Bent Brigham Hospital, Boston	S Lim 50	IC	Lab, Clin C, Lec	38	7/ 6/59	7/11/59	C; 6 days	100
Electrocardiography I	New England Center Hospital 171 Harrison Ave., Boston	G Lim 35	IC	Clin C, Sem, Lec, Pan, O, AV	30	12/ 1/58	12/5/58	C; 5 days	40
Electrocardiography II—Advanced	New England Center Hospital 171 Harrison Ave., Boston	G	IC	Sem, Lec, Pan, O	15	5/11/59	5/13/59	C; 3 days	25
Electrocardiographic Diagnosis	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G Lim 60	IC	Lab, PD, Clin C, Lec, Pan, O, AV	39	4/13/59	4/18/59	C; 5½ days	75
Basic Electrocardiography	Highland Park General Hospital 389 Glendale Ave., Highland Park, Mich.	S Lim 30	II	PD, LC, Lec, O, AV, EPP	22	10/ 1/58	3/15/59	I; 22 sessions 1 hr. weekly, Fridays	Unknown
Introduction to Electrocardiography for General Physicians	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	IC	Lec, O, AV, EPP	30	5/11/59	5/15/59	C; 5 days	65
Electrocardiography	Office of Postgraduate Affairs University of Nebraska College of Medicine 42nd and Dewey, Omaha 5	G	IC	Lec, O, AV	18	9/29/58	10/ 1/58	C; 3 days	30
Advanced Electrocardiography	Seton Hall College of Medicine and Dentistry, Department of Postgraduate Medical Education 31 Clinton St., Newark, N.J.; course at Alexian Brothers Hospital, Elizabeth, N.J.	G Lim 45	II	Lec, O, AV	16½	10/ 6/58	12/15/58	I; 11 sessions 1½ hr. weekly, Mondays	35
Clinical Correlation of Electrocardiograms with Disease Processes (Hospitalized Patients)	Albany Medical College 47 New Scotland Ave., Albany 8, N.Y.	G	II	EPP	24	Arranged		Arranged	60
Principles of Electrocardiography	Albany Medical College 47 New Scotland Ave., Albany 8, N.Y.	G	II	Sem, O, AV	12	9/18/58	10/23/58	I; 6 sessions 2 hr. weekly, Thursdays	60
Advanced Course in Interpretation of Electrocardiograms	Albany Medical College 47 New Scotland Ave., Albany 8, N.Y.	G Lim 20	II	Sem, O, AV	12	10/30/58	12/11/58	I; 6 sessions 2 hr. weekly, Thursdays	60
Electrocardiography	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	IC	Sem, Lec, Pan, O, AV	21	11/19/58	11/21/58	C; 3 days	45
Advanced Reading Course in Electrocardiography	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N.Y.; course at Meadowbrook Hospital, East Meadow, N.Y.	G Lim 25	II	Lec	12	10/ 1/58	12/17/58	I; 12 sessions 1 hr. weekly, Wednesdays	25
Fundamentals of Electrocardiography	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N.Y.; course at Meadowbrook Hospital, East Meadow, N.Y.	G Lim 25	II	Lec	15	1/21/59	4/29/59	I; 15 sessions 1 hr. weekly, Wednesdays	25

Basic Electrocardiography	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N.Y. course at Beth-El Hospital, Brooklyn, N.Y.	G Lim 20	II	Lec, O, AV	12	10/58	11/58	I; 12 sessions 1 hr. twice weekly, Mondays, Fridays	20
Medicine PM 63A—Clinical Electrocardiography	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	II	Lec, O, AV	36	9/23/58 2/ 3/59	1/27/59	I; 19 sessions 2 hr. weekly, Tuesdays	100
Medicine PM 40—Electrocardiography	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	IC	Lab, PD, Lec, O, AV	30	10/13/58	10/24/58	C; 10 days	75
Medicine PM 43—Special Vectorcardiography	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Hospital for Joint Diseases, New York 35	G	IC	PD, Lec, O, AV	25	12/ 1/58	12/ 5/58	C; 5 days	75
549-A. Fundamentals of Clinical Electrocardiographic Interpretation	New York University Post-Graduate Medical School 550 First Ave., New York 16	G	II	Lab, Lec, O	32	11/ 5/58	3/ 4/59	I; 16 sessions 2 hr. weekly, Wednesdays	55
5413-A. Electrocardiography	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 40	IC	PD, Lec, O, AV	28	11/12/58 3/16/59	11/15/58	C; 4 days	85
5429-A. Clinical Electrocardiography	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 40	II	PD, Lec, O, AV	12	4/ 9/59	4/28/59	I; 8 sessions 1½ hr. weekly, Thursdays	45
5434-A. The Physiological Basis of Clinical Electrocardiology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G	IC	Lab, Lec, O	32	6/ 1/59	6/ 5/59	C; 4½ days	75
Fundamentals and Review Course in Electrocardiography	Westchester Heart Association, Inc. Pforzheimer Memorial Bldg., Purchase, N.Y.	G	II	Lec, Pan, O, AV	15	10/23/58	3/19/59	I; 10 sessions 1½ hr. Thursdays	
Electrocardiographic Interpretation	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N.Y.	G Lim 40	II	Lab, Lec, O, AV, EPP	14	10/ 9/58	11/20/58	I; 7 sessions 2 hr. weekly, Thursdays	15
Basic Principles of Electrocardiography	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N.Y.	G Lim 7	II	Lab, Lec, AV	14	4/ 2/59	5/21/59	I; 7 sessions 2 hr. weekly, Thursdays	15
Electrocardiographic Review, Advanced	Duke University School of Medicine Durham, N.C.	G Lim 40	IC	Lab, PD, LC, BR, Lec, Pan, O	18	1/59		C; 3 days	100 Paid by N.C. Health. Dept.
Electrocardiographic Review, Primary	Duke University School of Medicine Durham, N.C.	G Lim 40	IC	Lab, PD, LC, BR, Lec, Pan, O	18	6/59		C; 3 days	100 Paid by N.C. Health. Dept.
Advanced Electrocardiography	University of Oklahoma Medical Center 801 N. E. 13th St., Oklahoma City	G	IC	Lab, Sem, Lec, O, AV, EPP	40	3/ 2/59	3/ 6/59	C; 5 days	75
Basic Electrocardiography	Albert Einstein Medical Center Southern Division Fifth and Reed Sts., Philadelphia 47	G Lim 40	II	PD, Lec, AV	26	11/ 5/58	2/ 4/59	I; 12 sessions 3 hr. weekly, Wednesdays	50
Advanced Electrocardiography	Albert Einstein Medical Center Southern Division Fifth and Reed Sts., Philadelphia 47	G Lim 15	II	Lab, PD, Lec, EPP	30	2/18/59	4/22/59	I; 10 sessions 3 hr. weekly, Wednesdays	50
Electrocardiography and Other Graphic Methods in Cardiovascular Diagnosis	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G Lim 100	II	Lec, Pan, O, AV	30	1/ 8/59	3/12/59	I; 10 sessions 3 hr. weekly, Wednesdays	75
Electrocardiology	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at St. Joseph's Hospital Houston, Tex.	B	II	Lab, PD, BR, Clin C, Lec, AV, EPP	30	10/ 7/58	12/ 9/58	I; 10 sessions 2 hr. weekly, Tuesdays	30

ELECTROENCEPHALOGRAPHY

Electroencephalography	Program Director, Connecticut Postgraduate Seminar in Psychiatry and Neurology Connecticut State Hospital, Middletown, Conn.; course at Yale University School of Medicine, New Haven, Conn.	S Lim 40	II	Lec, O	6	10/20/58	11/ 3/58	I; 6 sessions 1 hr. weekly, Mondays	Nil

Key will be found on page 1954.

ELECTROENCEPHALOGRAPHY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Neurology PM 33—Clinical Electroencephalography	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital New York 29	S	II	Lec, O, AV	45	9/25/58	1/22/59	I; 15 sessions 3 hr. weekly	100
642-A. Electroencephalography	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 6	IC	Lab		Arranged		Arranged	350
556-A Electroencephalography	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	II	Lec, O, AV	12	10/6/58 3/ 2/59	11/24/58	I; 8 sessions 1½ hr. weekly, Mondays	35

ENDOCRINOLOGY

(See also General Practice, Gynecology, Internal Medicine, Pediatrics)

Physiological and Clinical Aspects of the Endocrine System	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	Sem, Lec, Pan, O, AV	6	12/10/58	12/10/58	C; 1 day	20
West Coast Circuit Courses	California Medical Association 2975 Wilshire Blvd., Los Angeles; course at hospitals in San Luis Obispo, Santa Marie, and Santa Barbara, Calif.	G	CC	BR, Lec, Pan, O, AV, EPP	7	10/14/58	10/16/58	1 day in each town	15
Endocrinology	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	G	II	Lec		1/59	3/59	I; once weekly for 11 wk.	10
Endocrinology and Metabolism	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	IC	PD, Sem, Lec, Pan, O, AV	14	1/28/59	1/29/59	C; 2 days	30
Recent Advances in Endocrinology	St. Michael's Hospital 306 High St., Newark, N. J.	G Lim 50	II	PD, Clin C, Lec, O, AV	8	10/58	2/59	I; 4 sessions 2 hr. mo., Wednesdays	25
Recent Advances in Endocrinology	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	IC	PD, LC, Clin C, Sem, O	6	1/29/59	1/29/59	C; 1 day	12
Metabolic Endocrinology	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Maimonides Hospital, Brooklyn, N. Y.	G Lim 20	II	PD, Lec, O	15	10/58	12/58	I; 10 sessions 1½ hr. weekly, Tuesdays	20
Endocrinology	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Jewish Hospital of Brooklyn, Brooklyn, N. Y.	G Lim 15	II	Lec	12	4/59	6/59	I; 12 sessions 1 hr. weekly, Thursdays	20
5421-A. Endocrinology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 40	II	PD, Lec, Pan, O	24	4/ 6/59	5/29/59	I; 24 sessions 1 hr. thrice weekly, Mondays, Thursdays, Fridays	50
Endocrine Postgraduate Assembly	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	B	IC	Lec		9/29/58	10/ 2/58	C; 4 days	100

ENDOSCOPY

(See also Gastroenterology, Gynecology, Urology)

Ten-Day Practical Course in Cystoscopy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 2	IC	Lab, PD, LC, BR, Clin C, Surg, Lec, O, EPP	30	9/ 8/58 9/22/58 10/27/58 11/10/58 12/ 1/58 1/ 5/59 1/19/59 2/ 2/59 2/16/59 3/ 2/59 3/16/59 3/30/59 5/ 4/59 5/18/59 6/ 1/59 6/15/59 7/ 6/59 7/20/59 8/ 3/59 8/17/59	9/19/58	C; 10 days	150

Clinical Bronchoscopy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 2	IC	Lab, PD, LC, Surg, Lec, O, EPP	15	9/15/58 10/20/58 11/17/58 12/ 8/58 1/19/59 2/16/59 3/16/59 4/20/59 5/18/59 6/15/59	9/19/58	C; 5 days	100
Bronchoesophagology	University of Illinois College of Medicine 1853 W. Polk St., Chicago 12	S Lim 15	IC	Lab, PD, LC, BR, Clin C, Sem, Surg, Lec, O, AV, EPP	84	10/27/58 Spring/59	11/8/58	C; 12 days	210
Gastroscopy	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Coney Island Hospital, Brooklyn, N. Y.	G Lim 4	II	Lec, AV	9	4/59	5/59	I; 6 sessions 1½ hr. weekly, Mondays	30
Bronchoscopy (Cadaver demonstrations)	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 8	II	Lab, Lec, O		Arranged		I; 8 sessions 1 hr. each, Wednesdays	150
Culdoscopy	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 8	II	PD, Lec	6	10/ 1/58 4/ 1/59	10/31/58	I; 3 sessions 2 hr. each, Monday, Wednesday, Friday	100
543-A. Gastroscopy	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 2	II	Lab, PD, EPP	36	9/ 8/58 12/ 1/58	12/ 8/58	I; 36 sessions 1 hr. thrice Weekly, Mondays, Wednesdays, Fridays	300
566-A. Culdoscopy	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 4	II	PD, LC, Surg, Lec, O, AV	6	11/24/58 1/26/59 4/27/59	11/28/58	I; 3 sessions 2 hr. each Monday, Wednesday, Friday	55
595-A. Endoscopy: Bronchoesophagology and Laryngology	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 10	IC	Lab, PD, LC, Sem, Surg, Lec, O, EPP	42	12/ 1/58	12/ 5/58	C; 6 days	100
Bronchoesophagology—Diagnosis and Treatment of Diseases of Bronchi, Lungs and Esophagus	Chevalier Jackson Clinic, Temple University Medical Center 3401 N. Broad St., Philadelphia 40	B Lim 21	IC	Lab, PD, LC, Clin C, Sem, Surg, Pan, O, AV	80	11/ 3/58 Spring/59	11/14/58	C; 11 days	250
				EPHEBOLOGY (See also Internal Medicine, Pediatrics, Psychiatry)					
Medical Alumni Seminar—A New Look at Adolescence and Problems	University of California Medical Center Second and Parnassus Ave., San Francisco; course at Children's Hospital, San Francisco	G	IC	Clin C, Sem, Pan, O, AV	7	11/15/58 1/24/59	11/15/58	C; 1 day	12.50
Adolescent Medicine 1	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Children's Hospital, Boston	G Lim 2	IC	PD, LC, BR, Clin C, Sem, Lec	35-40 hr. wk.	Arranged		Arranged	300
				FORENSIC MEDICINE (See also Occupational Medicine)					
Forensic Pathology	Armed Forces Institute of Pathology 6825 - 16th St., N.W., Washington 12, D. C.	S Lim 60	IC	Lab, Sem, Lec, Pan, O, AV, TV	40	10/ 6/58	10/11/58	C; 5½ days	Nil
533-A. Toxicology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G and non-Physicians Lim 6	IC	Lab, Sem, Lec, AV, EPP		Arranged		Arranged	100 per mo.
Compensation and Public Liability	Rochester General Hospital 501 W. Main St., Rochester, N. Y.	G	IC	Clin C, Sem, Pan, AV	12	11/11/58	11/13/58	C; 3 days	30
				FRACTURES (See also General Practice, Orthopedic Surgery, Radiology, Surgery)					
Fractures	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	Sem, Lec, Pan, O, AV		12/ 5/58	12/ 6/58	C; 2 days	Unknown
Course II in Clinical Fractures	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 3	PT	PD, LC, BR, Clin C, Surg, Lec, O	35	Arranged by appointment	Saturday following starting date	5 days	50

Key will be found on page 1954.

FRACTURES—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Course III in Fractures and Traumatic Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 20	IC	Lab, PD, LC, BR, Clin C, Surg, Lec, O, AV	86	10/20/58 3/ 9/59 6/15/59	11/ 1/58	C; 12 days	150
Fractures	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	IC	PD, Lec, Pan, O, AV	14	11/17/58	11/18/58	C; 2 days	30
Treatment of Fractures and Other Traumatic Conditions	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Massachusetts General Hospital, Boston	G Lim 75	IC	PD, LC, Lec, Pan	46	9/29/58	10/ 4/58	C; 6 days	150
Fractures for General Physicians	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	IC	Lec, Pan, O, AV	18	11/17/58	11/19/58	C; 3 days	40
Course in Fractures	Duke University School of Medicine Durham, N. C.	G	IC	Unknown	4	10/ 4/58	10/ 4/58	C; 1 day	Unknown
Fractures	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive, Houston 25, Tex.; course at The University of Texas M.D. Anderson Hospital, Houston, Tex.	G Lim 270	II	PD, Lec, Pan	9	5/ 5/59	5/19/59	I; 3 sessions 3 hr. weekly, Tuesdays	20

GASTROENTEROLOGY

(See also Basic Sciences, Endoscopy, Radiology)

Physiological and Clinical Aspects of the Gastrointestinal Tract	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	Sem, Lec, Pan, O, AV	6	2/18/59	2/18/59	C; 1 day	20
Gastroscopy and Gastroenterology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 5	IC	Lab, PD, LC, BR, Clin C, Lec, O, AV, EPP	40	9/ 8/58 3/ 2/59	9/19/58	C; 12 days	200
Gastroenterology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 20	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, O	60	1/13/59	4/24/59	C; 12 days	150
Diarrheal Diseases	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	G	IC	Lec, Pan, O, AV	11	1/21/59	1/22/59	C; 2 days	15
Clinical Traineeship in Gastroenterology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 2	PT	Lab, PD, LC, BR, Clin C, Sem, Lec, AV, EPP		Arranged	1 mo. later	30 days	50 per mo. in state; 100 per mo. out of state
Gastroenterology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	IC	PD, Pan, O, AV	14	1/21/59	1/22/59	C; 2 days	45
Gastroenterology	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	B Lim 150	IC	PD, Lec, Pan, O, AV	35	11/10/58	11/14/58	C; 5 days	50
Modern Concepts in Gastroenterology	Seton Hall College of Medicine and Dentistry, Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Clara Maass Memorial Hospital, Belleville, N. J.	G Lim 50	II	Lec, O, AV	18	1/15/59	4/ 9/59	I; 12 sessions 1½ hr. weekly, Thursdays	60
Diagnosis and Treatment of Diseases of the Colon	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Coney Island Hospital, Brooklyn, N. Y.	G Lim 8	II	Lec, AV	9	10/58	11/58	I; 6 sessions 1½ hr. weekly, Mondays	20
Postgraduate Gastroenterology	American College of Gastroenterology 33 W. 60th St., New York 23; course at Jung Hotel, New Orleans	B	IC	LC, Lec	18	10/23/58	10/25/58	C; 3 days	35 for members; 50 non-members
Medicine PM 70-Gastroenterology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G Lim 30	II	PD, Lec, O, AV	52½	9/ 9/58	12/16/58	I; 15 sessions 3½ hr. weekly, Tuesdays	75
Medicine PM 73-Advanced Gastroenterology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G Lim 10	II	Sem, Lec, O, AV	52½	1/13/59	4/28/59	I; 15 sessions 3½ hr. weekly, Tuesdays	75
Medicine PM 45-Gastroenterology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	IC	PD, LC, BR, Lec, O, AV	30	4/ 6/59	4/10/59	C; 5 days	75

Clinical Gastroenterology	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 10	IC	Lab, PD, LC, BR, Clin C, Lec, O	60	10/ 1/58 4/ 1/59	10/31/58	C; 24 days	75
5428-A. Gastroenterology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 15	II	PD, LC, Clin C, Lec, Pan, O	24	4/ 8/59	4/27/59	I; 8 sessions 3 hr. weekly, Wednesdays	40
5430-A. Clinical Gastroenterology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 10	IC	PD, LC, Clin C, Lec, Pan, O	35	6/22/59	6/26/59	C; 5 days	75
Seminar on Diseases of the Digestive Tract	Ohio Academy of General Practice 209 S. High St., Columbus 15, Ohio; course at Good Samaritan Hospital, Dayton, Ohio	G	II	Sem	20	9/ 4/58	11/ 5/58	I; 10 sessions 2 hr. weekly, Thursdays	Unknown
Seminar on Gastrointestinal Disease	Dr. Gaston B. Hannah Southwestern Ohio Society of General Physicians Sharon and Willow Aves., Glendale, O.; course at Hartwell Country Club, Cincinnati	G	IC	Lec, Pan	4	10/19/58	10/19/58	C; 1 day	10
Gastroenterology	American College of Physicians 4200 Pine St., Philadelphia 4; course at University of Michigan Medical School, Ann Arbor, Mich.	S	IC	Clin C, Lec, Pan, O, AV	35-40	11/10/58	11/14/58	C; 5 days	30 A. C. P. members; 60 non-members
Special Diagnostic Methods and Procedures in Gastroenterology	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	II	Lec, Pan, O, AV	16	9/58	5/59	I; 16 sessions 1 hr. weekly, Fridays	30
Conference in Gastroenterology	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	B Lim 10	II	Lec, O, AV	60	9/58	5/59	I; 30 sessions 2 hr. weekly, Thursdays	50

GENERAL PRACTICE

(See also all other categories)

Postgraduate Medical Assembly—Internal Medicine and Surgery	Birmingham Academy of Medicine Tutwiler Hotel, Birmingham, Ala.	G Lim 500	IC	Clin C, Sem, Lec, Pan, AV	24	9/ 7/58	9/ 9/58	C; 3 days	15
John A. Andrew Clinical Society	Secretary, John A. Andrew Memorial Hospital of Tuskegee Institute Tuskegee Institute, Ala.	G Lim 500	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV	30	4/12/59	4/17/59	C; 6 days	15
North Coast Counties Circuit Course	California Medical Association 2975 Wilshire Blvd., Los Angeles; course at hospitals in Eureka, Ukiah, Napa, Calif.	G	CC	Lec, O	16	10/ 3/58	3/27/59	Mondays, Tuesdays and Wednesdays	30
Sacramento Valley Circuit Courses—6th Annual	California Medical Association 2975 Wilshire Blvd., Los Angeles; course at Marysville and Auburn, Calif.	G	CC	LC, BR, Lec, O	32	10/13/58	3/27/59	1 weekly; 8 sessions (4 hr.)	30
Sacramento Valley Circuit Courses—6th Annual	Dunsmuir and Chico, Calif.	G	CC	Lec	16	10/13/58	3/27/59	1 weekly; 8 sessions (2 hr.)	30
9th Annual Regional Postgraduate Institute—North Coast Counties	California Medical Association 2975 Wilshire Blvd., Los Angeles; course at Hoberg's Resort, Lake County, Calif.	G	IC	Lab, LC, Sem, Lec, Pan, O, EPP	12	6/ 4/59	6/ 6/59	C; 3 days	20
9th Annual Regional Postgraduate Institute—Southern Counties	California Medical Association 2975 Wilshire Blvd., Los Angeles 5; course at Disneyland Hotel, Anaheim, Calif.	G	IC	Sem, Lec, Pan, O	12	4/23/59	4/24/59	C; 2 days	20
9th Annual Regional Postgraduate Institute—West Coast Counties	California Medical Association 2975 Wilshire Blvd., Los Angeles 5; course at Golden Bough Theater and La Playa Hotel, Carmel, Calif.	G	IC	PD, Sem, Lec, Pan, O, AV	12	5/14/59	5/15/59	C; 2 days	20
9th Annual Regional Postgraduate Institute—Sacramento Valley Counties	California Medical Association 2975 Wilshire Blvd., Los Angeles; course at Tahoe Tavern, Lake Tahoe, Calif.	G	IC	Lec, Pan, O	12	6/25/59	6/27/59	C; 3 days	20
Stockton Postgraduate Study Club	Stockton Post Graduate Study Club 536 N. Commerce St., Stockton, Calif.; course at College of the Pacific, Stockton, Calif.	G	II	Lec, Pan, O, AV	12	9/11/58	11/13/58	I; 8 sessions 1½ hr. weekly, Thursdays	10
Postgraduate Medical Lecture Series	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24; course at St. Joseph Hospital, Burbank, Calif.	G Lim 40	II	Sem, Lec, Pan, O, AV	24	9/23/58	12/ 9/58	I; 12 sessions 2 hr. weekly, Tuesdays	50

Key will be found on page 1954.

GENERAL PRACTICE—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Postgraduate Medical Lecture Series	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24; course at St. Mary's Hospital, Long Beach, Calif.	G	II	Lec, Pan, O, AV	24	3/ 3/59	5/19/59	I; 12 sessions 2 hr. weekly, Tuesdays	50
Common Problems of the Foot	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	PD, Sem, Lec, Pan, O, AV		Spring/59		Unknown	Unknown
Management of Non-Surgical Emergencies	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	Sem, Lec, Pan, O, AV		Spring/59		Unknown	Unknown
849—Symposium on Sexual Problems as Seen in General Practice	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33; course at Statler Hotel, Los Angeles	G	IC	Lec, Pan, O, AV	7	11/ 7/58	11/ 7/58	C; 1 day	25
852—Ward Walks in Rare Diseases	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33; course at Los Angeles County Hospital, Los Angeles 33	G Lim 20	II	PD, LC, BR, Lec, Pan	24	Spring/59		I; 12 sessions 2 hr. weekly, Thursdays	65
Twelfth Postgraduate Assembly	San Diego County General Hospital North end of Front St., San Diego 3, Calif.	B Lim 400	IC	Sem, Lec, Pan, AV	12	9/17/58	9/18/58	C; 1½ days	Nil
Medicine for General Practitioners	University of California Medical Center Second and Parnassus Ave., San Francisco; course at East Oakland Hospital, Oakland, Calif.	G Lim 50	II	Lec	24	9/16/58	12/ 9/58	I; 12 sessions 2 hr. weekly, Tuesdays	50
Medical Alumni Seminar—A New Look at Vaccination and Immunity	University of California Medical Center Second and Parnassus Ave., San Francisco; course at Children's Hospital, San Francisco	G	IC	Clin C, Sem, Pan, O, AV	7	3/21/59	3/21/59	C; 1 day	12.50
Course for Physicians in General Practice	University of California Medical Center Second and Parnassus Ave., San Francisco; course at Mt. Zion Hospital, San Francisco	G Lim 100	IC	Lab, PD, Clin C, Lec, Pan, O, AV	35	4/ 6/59	4/10/59	C; 5 days	70
Saint John's Hospital Postgraduate Assembly	Dr. John C. Eagan, Director Postgraduate Assembly, Saint John's Hospital 1328 22nd St., Santa Monica, Calif.	G Lim 600	IC	Lab, LC, Clin C, Lec, Pan, O	28	9/11/58	9/13/58	C; 3 days	Nil
General Applied Medical Science	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20; course at Fitzsimons Army Hospital Denver, Colo.	G	II	Lec		9/58	4/59	I; once weekly, Thursdays for 8 mo.	10
General Practice Review	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	G	IC	PD, Lec, O, AV	45	1/19/59	1/24/59	C; 6 days	55
Summer School of Alcohol Studies	Yale University Summer School of Alcohol Studies 52 Hillhouse Ave., Yale Station, New Haven, Conn.	G and non-medical persons	O	PD, Sem, Lec, Pan, O, AV	74	6/29/59	7/24/59	22 days	250
Management of Mass Casualties	Department of the Army Office of the Surgeon General Personnel and Training Division Washington 25, D. C.; course at Walter Reed Army Institute of Research, Washington 12, D. C.	G Lim 150	IC	Sem, Lec, Pan, O, AV, TV	44	9/15/58 2/16/59	9/20/58	C; 6 days	Nil
Management of Mass Casualties	Department of the Army Office of the Surgeon General Personnel and Training Division Washington 25, D. C.; course at Brooke Army Medical Center, Ft. Sam Houston, Tex.	G Lim 120	IC	Sem, Lec, Pan, O, AV	40	9/22/58 12/ 1/58 2/ 9/59 4/27/59 6/15/59	9/26/58	C; 5 days	Nil
Principles of Medical Operations in Nuclear Warfare	Department of the Army Office of the Surgeon General Personnel and Training Division Washington 25, D. C.; course at Walter Reed Army Institute of Research, Washington 12, D. C.	G Restricted to military personnel Lim 24	IC	Lec, Pan, O, AV, TV		9/29/58 3/23/59	10/31/58	C; 33 days	Nil
Ninth Annual Postgraduate Seminar—Recent Advances in Diagnosis and Therapy	Mt. Sinai Hospital of Greater Miami 4300 Alton Rd., Miami Beach 40, Fla.	B Lim 800	IC	Sem, Lec, Pan, O, AV	20	5/ 7/59	5/ 9/59	C; 3 days	20

Treatment of Varicose Veins	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 12	IC	Lab, PD, LC, Surg, Lec, O	10	9/15/58 2/ 2/59 3/ 2/59 4/ 6/59 5/ 4/59 6/ 1/59	9/17/58	C; 2 days	50
Medicine for Today	Illinois Academy of General Practice 14 E. Jackson Blvd., Chicago 4; course at Alton, Belleville, Centralia, Chicago (North), Chicago (South), Chicago Heights, Champaign, Effingham, Elgin, Elmhurst, Geneva, Herrin, Hinsdale, Joliet, Moline, Mount Carmel, Oak Park, Ottawa, Peoria, Rockford, Springfield, Waukegan	G	CC	PD, Lec, O, AV	24	9/29/58 3/16/59	11/14/58	12 sessions 2 hr. each	40 for members; 80 for non-members
General Medicine	Chicago Medical Society 86 E. Randolph St., Chicago; course at Hamilton Hotel, Chicago	G Lim 100	IC	Lec, Pan, O	29½	10/27/58	10/31/58	C; 5 days	75
Refresher Course for the General Physician	State University of Iowa College of Medicine University Hospitals, Iowa City	G	IC	PD, BR, Lec, Pan, O, AV	28	2/17/59	2/20/59	C; 4 days	45; 3 to members of AGP
Alumni Day	State University of Iowa College of Medicine University Hospitals, Iowa City	G	IC	Lec, Pan, O, AV	8	6/12/59	6/13/59	C; 2 half days	Nil
Infectious Diseases	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	IC	Lec, Pan, O, AV	7	9/19/58	9/19/58	C; 1 day	Nil
General Practice Symposia	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	II	Lec, Pan, O, AV	24	11/20/58	4/16/59	I; 6 sessions 4 hr. once mo., Thursdays	10 members K. C. or Wyandotte Acad.; 20 non-members
Kansas Circuit Course	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.; course at Riley County Hospital, Manhattan, Ks. St. Joseph Hospital, Concordia, Ks. St. Elizabeth Hospital, Hutchinson, Ks. Colby Country Club, Colby, Ks. To be selected, Arkansas City, Ks. To be selected, Garden City, Ks. Newman Memorial Hospital, Emporia, Ks. St. Rose Hospital, Great Bend, Ks.	G	CC	PD, Lec, Pan, O, AV	33 at each location	12/ 2/58 12/ 2/58 12/ 3/58 12/ 3/58 12/ 4/58 12/ 4/58 12/ 5/58 12/ 5/58	4/28/59	5½ hr. one day a mo.; afternoon and evening for 6 mo.	30
General Medicine and Surgery	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.; course at Southeast Kansas Tuberculosis Hospital, Chanute, Ks.	G	II	Clin C, Lec, O, AV	7	Unknown		I; 7 sessions 1 hr.	Unknown
General Medicine and Surgery	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks. course at St. Joseph, Mo.	G	II	Lec, O, AV	7	Unknown		I; 7 sessions 1 hr.	Nil
The Ophthalmoscope: Its Use in Medicine	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	IC	PD, Lec, Pan, O, AV	7	1/23/59	1/23/59	C; 1 day	15
Fall Clinical Conference—Symposium on Gastrointestinal and Infectious Diseases	Lexington Clinic 1300 S. Broadway, Lexington, Ky.; course at hotel, Lexington, Ky.	G	IC	Lab, Clin C, Sem, Lec, Pan, O, AV	9 to 12	10/22/58	10/23/58	C; 2 days	Nil
Refresher Course for Practitioners	Louisiana State University School of Medicine 1542 Tulane Ave., New Orleans; course at Confederate Memorial Medical Center, Shreveport, La.	G Lim 150	II	PD, Clin C, Lec, Pan, O, AV	100	9/58	3/59	I; 16-17 sessions 6 hr. biweekly, Thursdays	Unknown
Postgraduate Medical Refresher Course	Medicinics of Minnesota 601 Medical Arts Bldg., Minneapolis; course at Florida Academy of General Practice, Fort Lauderdale	G Lim 350	IC	Lec, Pan	32	3/ 2/59	3/12/59	C; 9 days	50
Neurology and Neurosurgery for General Physicians	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	IC	Lec, O, AV	30	11/17/58	11/21/58	C; 5 days	65
The Newer Drugs in General Practice	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	IC	Lec, O, AV	15	1/15/59	1/17/59	C; 3 days	40
Trauma for General Physicians	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	IC	Lec, O, AV	7	3/14/59	3/14/59	C; 1 day	10
Fall Refresher	Minnesota Academy of General Practice 15 Ninth Ave., S., Hopkins, Minn.; course at Mayo Civic Auditorium, Rochester, Minn.	G	IC	PD, LC, Sem, Lec, Pan, O, AV	10	10/21/58	10/22/58	C; 2 days	10

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GENERAL PRACTICE—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Clinical Traineeships—Registrant chooses field	University of Mississippi Medical Center, Secretary, Postgraduate Education Committee 2500 N. State St., Jackson, Miss.	G	PT	Lab, PD, LC, BR, Clin C, Surg, Lec, O, AV	Arranged	Arranged		Arranged	Nil
Annual Symposium on Infectious Diseases	American Academy of General Practice Volker Blvd. at Brookside, Kansas City, Mo.; course at Battenfield Auditorium, University of Kansas Medical Center, Kansas City, Ks.	G	IC	Lec, Pan, O, AV	6	9/19/58	9/19/58	C; 1 day	Nil
Spring Postgraduate Conference—Surgery, Obstetrics and Gynecology	The Creighton University School of Medicine and Creighton Memorial-St. Joseph Hospital Omaha, Neb.	G Lim 50	IC	PD, LC, BR, Clin C, Lec, Pan, O	15	4/14/59	4/16/59	C; 2½ days	10
Fourth Annual Trauma Day	Office of Postgraduate Affairs University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	IC	Clin C, Sem, Lec, Pan, O, AV	6	5/ 6/59	5/ 6/59	C; 1 day	10
Visiting Chief Program	Atlantic City Hospital 26 S. Ohio Ave., Atlantic City, N. J.	G Lim 50	O	PD, LC, BR, Sem, Lec, O, AV	480 per year	1/ 5/59	12/19/59	C; 240 days per year	Nil
Internal Medicine and General Surgery Review	Director of Education, Lovelace Foundation 4800 Gibson Blvd., S.E., Albuquerque, N. Mex.; course at Bataan Memorial Methodist Hospital, Albuquerque, N. Mex.	G Lim 50	IC	PD, LC, BR, Clin C, Lec, Pan, O	12	10/15/58 12/10/58 2/11/59 3/25/59	10/18/58	C; 3 days	Nil
Internal Medicine and General Surgery Review	Director of Education, Lovelace Foundation 4800 Gibson Blvd., S.E., Albuquerque, N. Mex.; course at various County Medical Societies throughout state	G	CC	Lec	2	10/20/58 12/ 5/58 2/16/59 3/20/59	10/20/58	C; 1 day	Nil
Clinical Refresher Course—Choice of Subject	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G Lim 1	IC	PD, LC, BR	As desired	Arranged		As desired	60 for each 5 days
Two-Way Radio Conference—Albany Medical College to Area Hospitals	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	R	Radio lec, O	24	11/ 4/58	5/ 1/59		Nil
Prophylactic Use of Antibiotics	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	IC	PD, LC, Clin C, Sem, O, AV	6	1/22/59	1/22/59	C; 1 day	12
Recent Advances in Clinical Practice	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	IC	PD, LC, BR, Sem, Lec, Pan, O, AV	39	9/ 8/58	9/13/58	C; 6 days	75
Modern Laboratory Procedures in Clinical Practice; Their Use and Interpretation	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	IC	Lab, Sem, Lec, Pan, O	14	10/15/58	10/16/58	C; 2 days	30
Fluid and Electrolyte Therapy and Parenteral Nutrition in Medicine, Surgery and Pediatrics	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	IC	PD, LC, Sem, Lec, Pan, O, AV	14	11/12/58	11/13/58	C; 2 days	30
Minor Surgery and Office Orthopedics	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	IC	PD, LC, Sem, Lec, Pan, O, AV	14	12/10/58	12/11/58	C; 2 days	30
Postgraduate Radio Program	The New York Academy of Medicine 2 E. 103rd St., New York 29	G	HS(R)	Lec, Pan	52	9/58	9/59	I; 52 sessions 1 hr. weekly, Thursdays	Nil
Postgraduate Week, Research Contributions to Clinical Practice	The New York Academy of Medicine 2 E. 103rd St., New York 29	G Lim 700	O	Lec, Pan	18	10/13/58	10/17/58	C; 5 days	Nil
Monthly Panel Meetings on Therapeutics for the General Physician	The New York Academy of Medicine 2 E. 103rd St., New York 29	G	H	Lec	9	11/14/58	4/10/59	I; 6 sessions 1½ hr. mo., Fridays	Nil
Proctology, Gastroenterology, with Operative Proctology (cadaver)	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 12	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV, EPP	72	10/ 1/58 4/ 1/59	10/31/58	C; 24 days	200
Course for General Practitioners—Medicine, Surgery, Allied Subjects	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 10	IC	Lab, PD, LC, BR, Clin C, Lec, Pan, O, AV	192	10/ 1/58 4/ 1/59	10/31/58	C; 30 days	100
Seminar on Dyspnoea	New York Polyclinic Hospital 345 W. 50th St., New York 19	G	IC	PD, LC, Clin C, Sem, Lec, Pan, O, AV	16	11/17/58	11/18/58	C; 2 days	35
Low Back Pain	New York Polyclinic Hospital 345 W. 50th St., New York 19	G	IC	PD, LC, Clin C, Sem, Lec, Pan, O, AV	16	11/19/58	11/20/58	C; 2 days	35
Pain in Right Lower Quadrant	New York Polyclinic Hospital 345 W. 50th St., New York 19	G	IC	PD, LC, Clin C, Sem, Lec, Pan, O, AV	16	11/21/58	11/22/58	C; 2 days	35
545-A. General Medicine. The Application of Recent Advances to Clinical Practice	New York University Post-Graduate Medical School 550 First Ave., New York 16	G	H	Clin C, Lec, O, AV	56	9/16/58	5/12/59	I; 28 sessions 2 hr weekly, Tuesdays	200
541-A. Review Course in General Medicine	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	IC	PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV	70	7/ 7/59	7/18/59	C; 10 days	125

Trauma	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	B Lim 100	IC	Lec, Pan, O, AV	6	Spring/59		C; 1 day	Unknown
Buncombe County Postgraduate Medical Course	Office of Continuation Education University of North Carolina School of Medicine Chapel Hill, N. C.; course at Memorial Mission Hospital, Asheville, N. C.	G	II	Lec, Pan, O, AV	18	9/16/58	10/28/58	I; 6 sessions 3 hr. weekly, Tuesdays	25
Burke County Postgraduate Medical Course	Office of Continuation Education University of North Carolina School of Medicine Chapel Hill, N. C.; course at Grace Hospital, Morganton, N. C.	G	II	Lec, Pan, O, AV	18	9/17/58	10/29/58	I; 6 sessions 3 hr. weekly, Wednesdays	25
University of North Carolina School of Medicine Symposium	University of North Carolina School of Medicine Chapel Hill, N. C.	G	IC	PD, BR, Clin C, Lec, Pan, O, AV	12	11/20/58	11/21/58	C; 2 days	Nil
First District Postgraduate Medical Course	Office of Continuation Education University of North Carolina School of Medicine Chapel Hill, N. C.; course at Edenton, Ahoskie, Elizabeth City, N. C.	G	CC	Lec, Pan, O, AV	18	1/14/59	2/18/59	I; 6 sessions 3 hr. weekly, Wednesdays	25
Wake County Postgraduate Medical Course	Office of Continuation Education University of North Carolina School of Medicine Chapel Hill, N. C.; course at Rex Hospital and Hotel Sir Walter Raleigh, Raleigh, N. C.	G	II	Lec, Pan, O, AV	18	1/15/59	2/19/59	I; 6 sessions 3 hr. weekly, Thursdays	25
Duke Medical Postgraduate Course	Duke University School of Medicine Durham, N. C.	G Lim 50	IC	Lab, PD, LC, BR, Surg, Lec	28	6/15/59	6/18/59	C; 4 days	25
Postgraduate Course in Mycology	Duke University School of Medicine Durham, N. C.	G Lim 20	IC	Lab, PD, LC, BR, Lec, Pan	84	7/ 1/59	7/31/59	C; 24 days	100
Pediatrics, Internal Medicine, Obstetrics and Gynecology	Southern Postgraduate Seminar Saluda, N. C.	G Lim 125	IC	PD, Clin C, Sem, Lec, Pan, AV	35 hr. per wk.	7/ 6/59	7/25/59	C; 3 wk.	35 per wk.
General Practice—Recent Advances in Specialties	Frank E. Bunts Educational Institute 2829 E. 93rd St., Cleveland	G Lim 125	IC	LC, Sem, Surg, Lec, Pan, O, AV	10	2/11/59	2/12/59	C; 2 days	20
Annual Postgraduate Seminar	Huron Road Hospital 13951 Terrace Road, Cleveland 12	B Lim 150	IC	Sem, Lec, Pan, O	16	Spring/59		C; 2 days	15
Selected Topics in Medicine	Registrar, School of Medicine, Western Reserve University 2109 Adelbert Rd, Cleveland; course at University Hospitals of Cleveland, Cleveland	G Lim 80	II	PD, Clin C, Lec, Pan, O, AV	30	9/17/58	11/26/58	I; 10 sessions 3 hr. weekly, Wednesdays	30
Postgraduate Short Course Series	University of Oklahoma Medical Center 801 N. E. 13th St., Oklahoma City	G	II	PD, LC, Sem, Lec, Pan, O, AV	40	9/10/58	6/10/59	I; 10 sessions 4 hr. 2nd Wednesday of each mo.	25 for series, 3.50 per session
Oregon-Oklahoma Combined Specialty Meeting	University of Oklahoma Medical Center 801 N. E. 13th St., Oklahoma City	G	IC	Clin C, Sem, Lec, Pan, O	9	10/ 3/58	10/ 4/58	C; 2 days	15
Recent Advances in Clinical Practice	University of Oklahoma Medical Center 801 N. E. 13th St., Oklahoma City	G	IC	PD, Sem, Lec, Pan, O, AV	8	5/22/59	5/22/59	C; 1 day	Nil
Refresher Course for General Practitioners	Geisinger Memorial Hospital and Foss Clinic Danville, Pa.	G Lim 20	II	PD, LC, BR, Clin C, Sem, Surg, Lec, O, AV	60	1/14/59	3/18/59	I; 20 sessions 3 hr. weekly, Wednesdays	60
Refresher Course for General Practitioners	Albert Einstein Medical Center Northern Division York and Tabor Rds., Philadelphia 41	G Lim 21	II	PD, LC, BR, Sem, Pan, AV, EPP	50	3/ 4/59	5/ 6/59	I; 10 sessions 5 hr. weekly, Wednesdays	50
The Jefferson Graduate Assembly	The Jefferson Medical College 1025 Walnut St., Philadelphia	G	IC	PD, LC, Clin C, Lec, Pan, O, AV	18	2/ 4/59	2/ 6/59	C; 3 days	15
Advances in Clinical Medicine	U. S. Veterans Administration Hospital University Dr., Pittsburgh	G Lim 50	II	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, AV	60	3/ 5/59	5/ 7/59	I; 10 sessions 6 hr. weekly, Thursdays	60
Greenville Post-Graduate Seminar	Greenville General Hospital 100 Mallard St., Greenville, S. C.	G	IC	PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV	23	4/14/59	4/16/59	C; 3 days	Nil
Founders' Day Postgraduate Seminar	Medical College of South Carolina 16 Lucas St., Charleston, S. C.	G	IC	PD, LC, Lec, AV	22	11/ 4/58	11/ 6/58	C; 3 days	Unknown
Advanced Clinical Bedside Courses	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive, Houston 25, Tex.; course at Texas Medical Center Institutions, Houston, Tex.	G Lim 5	II	Lab, PD, LC, BR, Clin C, Sem, Lec, O, AV, EPP	8	9/ 9/58 1/59	9/30/58	I; 4 sessions 2 hr. weekly, Tuesdays	15
Postgraduate Conference	University of Virginia School of Medicine Charlottesville, Va.	G	C	PD, LC, BR, Clin C, Sem, Lec, Pan, O		11/58 2/59 5/59	11/58	C; 1 day	Nil

Key will be found on page 1954.

GENERAL PRACTICE—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
General Practice 1958	Assistant to the Dean University of Wisconsin Medical School 418 N. Randall Ave., Madison 6, Wis.	G Lim 100	IC	PD, Lec, Pan, O, AV	18	11/ 6/58	11/ 8/58	C; 2½ days	30

GERIATRICS

(See also Gynecology, Internal Medicine, Malignant Disease, Psychiatry)

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Graduate Symposium on Geriatric Medicine	American Geriatrics Society 2307 Post Road, Greenwood, R.I.; course at Waldorf-Astoria Hotel, New York 22	G	IC	PD, Sem, Lec, Pan, O, AV	16	11/ 6/58	11/7/58	C; 2 days	Nil
Medical Problems of the Elderly	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at The University of Texas M. D. Anderson Hospital, Houston, Tex.	B Lim 200	IC	Lec, Pan, AV	24	10/21/58	10/24/58	C; 4 days	5

GYNECOLOGY

(See also, Anatomy, Endoscopy, Pathology)

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Course II in Office and Operative Gynecology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 18	IC	Lab, PD, LC, BR, Clin C, Surg, Lec, O, AV, EPP	94	9/ 8/58 10/13/58 2/ 9/59 3/16/59 4/13/59 6/15/59	9/20/58	C; 12 days	150
Vaginal Approach to Pelvic Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 16	IC	PD, LC, BR, Surg, Lec, O, AV	20	10/ 6/58 11/17/58 2/ 2/59 3/ 9/59 4/27/59 6/ 8/59	10/10/58	C; 5 days	125
Gynecology 3	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Massachusetts General Hospital, Boston	G Lim 50	IC	Lab, PD, LC, BR, Clin C, Lec	78	9/15/58	9/26/58	C; 11 days	175
Gynecology 4	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Free Hospital for Women, Brookline, Mass.	G Lim 45	IC	Lab, PD, Clin C, Surg, Lec, Pan	45	4/27/59	5/ 1/59	C; 5 days	100
Gynecology for General Physicians	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G Lim 50	IC	Lec, O, AV	18	6/15/59	6/17/59	C; 3 days	40
Modern Concepts in Gynecology	Seton Hall College of Medicine and Dentistry, Department of Postgraduate Medical Education 31 Clinton St., Newark, N.J.; course at Alexian Brothers Hospital, Elizabeth, N.J.	G Lim 50	II	Lec, O, AV	15	1/ 7/59	3/11/59	I; 10 sessions 1½ hr. weekly, Wednesdays	60
Gynecology	University of Buffalo School of Medicine 3435 Main St., Buffalo	G Lim 16	IC	PD, Sem, Lec, Pan, O, AV	14	10/ 8/58	10/ 9/58	C; 2 days	30
Office Gynecology	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N.Y.; course at Meadowbrook hospital, East Meadow, N.Y.	G Lim 10	II	Lec	6	2/ 5/59	3/12/59	I; 6 sessions 1 hr. weekly, Thursdays	15
Applied Gynecological Pathology	The Long Island Jewish Hospital 270-05 76th Ave., New Hyde Park, N.Y.	S Lim 10	II	Clin C, AV	42	10/ 6/58	1/ 5/59	I; 14 sessions 3 hr. weekly, Mondays	100
Office Gynecology	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Jewish Hospital of Brooklyn, Brooklyn, N. Y.	G Lim 30	II	Lec, AV	10	10/58	12/58	I; 10 sessions 1 hr. twice weekly, Mondays, Thursdays	20
569-A. Diagnosis and Therapy of Malignant Neoplasms of the Female Genital Tract	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 10	IC	Lab, PD, LC, Clin C, Sem, Surg, Lec, O, AV, EPP	35	9/29/58	10/ 3/58	C; 5 days	150
568-A. Gynecological Cytology	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 6	II	Lab, Sem, Lec, O, AV, EPP	32	9/30/58 4/14/59	11/25/58	I; 16 sessions 1 hr. Tuesdays, 3 hr. Thursdays, weekly	100

567-A. Gynecological Endocrinology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 30	IC	Lab, PD, LC, Clin C, Sem, Lec, O	35	10/ 6/58 4/ 6/59	10/10/58	C; 5 days	125
Gynecology	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N.Y.	G Lim 12	IC	LC, Lec, Pan, O	40	4/20/59	4/24/59	C; 5 days	25
Clinical Gynecology—Clinical Symptomatology, Diagnosis and Management	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at University of Texas M. D. Anderson Hospital, Houston, Tex.	G Lim 4	II	Lab, PD, LC, BR, Clin C, Lec, EPP	48	9/ 2/58 10/ 7/58 11/ 4/58 scheduled also for 1959	9/25/58	I; 8 sessions 6 hr. twice weekly, Tuesdays, Thursdays	50

HEMATOLOGY

(See also Internal Medicine)

Clinical Hematology	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	S Lim 12	IC	Lab, PD, BR, Lec, AV, EPP	48	6/59	6/59	C; 6 days	100
Hematology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 20	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, O	30	6/ 1/59	6/ 5/59	C; 5 days	100
Clinical Hematology	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	G	II	Lab, PD, LC, BR, Clin C, O, AV	24	Any Thursday		I; 12 sessions 2 hr. weekly, Thursdays	30
Hematology—I	University of Kansas School of Medicine 39th and Rainbow Blvd., Kansas City, Ks.	G	HS	HS (C), Lab, AV, EPP		10/ 1/58 4/ 1/59	6/ 1/59	9 monthly lessons	45
Clinical Traineeship in Hematology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 1	PT	Lab, PD, LC, BR, Clin C, Sem, Lec, O, AV, EPP	120	11/ 3/58 2/ 2/59 3/ 2/59	11/29/58	30 days	50 per mo. in state; 100 per mo. out of state
Hematology, Thrombosis, Embolization and Fibrinolysis	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	IC	PD, Sem, Lec, Pan, O, AV	14	2/16/59	2/17/59	C; 2 days	30
Pediatric Hematology	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	B Lim 50	IC	Sem, Lec, Pan, O	20	4/ 9/59	4/11/59	C; 2½ days	25
Hematology	New England Center Hospital 171 Harrison Ave., Boston	S Lim 75	IC	PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV	15	4/ 9/59	4/11/59	C; 3 days	20
Diseases of Blood and Blood-forming Organs	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G Lim 40	IC	Lab, PD, Clin C, Lec, Pan, O	35	3/30/59	4/ 3/59	C; 5 days	50
Hematology	Office of Postgraduate Affairs University of Nebraska College of Medicine 42nd and Dewey, Omaha 5	G	IC	Lab, Sem, Lec, Pan, O, AV, EPP	12	10/15/58	10/16/58	C; 2 days	20
Practical Aspects of Clinical Hematology	Seton Hall College of Medicine and Dentistry, Department of Postgraduate Medical Education 31 Clinton St., Newark, N.J.; course at Martland Medical Center, Newark, N.J.	G Lim 45	II	Lec, O, AV	15	12/22/58	3/ 4/59	I; 10 sessions 1½ hr. weekly, Wednesdays	50
Hematological Disorders—Part of course entitled "Application of Modern Medicine to Every day Practice"	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N. Y.; course at Doctors Hospital, Freeport, N.Y.	G Lim 30	II	Sem	12	9/ 2/58	10/21/58	I; 8 sessions 1½ hr. weekly, Tuesdays	24
Medicine PM 66—Clinical Hematology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G Lim 20	II	Lab, PD, BR, Lec, O, AV	72	9/ 9/58	1/20/59	I; 18 sessions 4 hr. weekly, Tuesdays	100
Medicine PM 39—Clinical Hematology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	II	Lab, PD, LC, Lec, O, AV	24	10/28/58	12/16/58	I; 8 sessions 3 hr. weekly, Tuesdays	50
Medicine PM 67—Advanced Hematology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G Lim 10	II	Lab, PD, EPP	32	2/ 3/59	5/19/59	I; 16 sessions 2 hr. weekly, Tuesdays	75
Medicine PM 21—Laboratory Methods in Hematology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G Lim 6	IC	Lab, AV, EPP	64	2/16/59	3/12/59	C; 16 days	200
Medicine PM 22—Laboratory Methods in Blood Banks	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G Lim 6	II	Lab, PD, Lec, O, AV	24	3/31/59	5/ 5/59	I; 6 sessions 4 hr. weekly, Tuesdays	50

Key will be found on page 1954.

HEMATOLOGY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
5412-A. Hematology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	IC	PD, LC, Lec, Pan, O, AV	35	11/10/58	11/14/58	C; 5 days	85
5424-A. Clinical Hematology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	II	PD, LC, Lec, Pan, O	30	4/ 7/59	5/28/59	I; 16 sessions 1¼ hr. twice weekly, Tuesdays, Thursdays	50
Hematology	Albert Einstein Medical Center Northern Division York and Tabor Rds., Philadelphia 41	G Lim 20	II	PD, LC, BR, Sem, Pan, O, AV	30	2/13/59	4/24/59	I; 10 sessions 3 hr. weekly, Fridays	50
Hematology Conference	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G Lim 10	II	Sem, Lec, Pan, O, AV	16	9/58	12/58	I; Unknown	25
Clinical Hematology	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G Lim 10	II	Lec, Pan, O, AV	Unknown	1/59	5/59	I; 16 sessions	25

INFERTILITY

Infertility	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	PD, Sem, Lec, Pan, O, AV		Spring/59		Unknown	Unknown
464-A. Infertility	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 16	IC	Lab, PD, Clin C, Surg, Lec, O, EPP	21	12/ 1/58	12/ 3/58	C; 3 days	50

INTERNAL MEDICINE

(See also Allergy, Basic Sciences, Cardiovascular Disease, Clinical Pathology, Dermatology, Electrocardiography, Endoscopy, Ephebology, Gastroenterology, Hematology, Neurology, Occupational Medicine, Peripheral Vascular Disease, Physical Medicine and Rehabilitation, Psychiatry, Pulmonary Disease, Radiology, Radioisotopes)

Course In A Phase of Internal Medicine	California Medical Assoc. 2975 Wilshire Blvd., Los Angeles; course at University of California School of Medicine, San Francisco	S Lim 60	IC	PD, LC, Lec, Pan, O	12	2/23/59	2/25/59	C; 3 days	25
Management of Psychosomatic Symptoms in Internal Medicine	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	II	Sem, Lec, Pan, O, AV		Fall/58		Unknown	Unknown
Internal Medicine	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	II	Sem, Lec, Pan, O, AV		Fall/58		Unknown	Unknown
Teaching Clinics	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G Lim 75	II	PD, Sem, Lec, Pan, O, AV	24	9/25/58	12/18/58	I; 12 sessions 2 hr. weekly, Thursdays	50
Physiological and Clinical Aspects of Respiration	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	Sem, Lec, Pan, O, AV	6	10/15/58	10/15/58	C; 1 day	20
Physiological and Clinical Aspects of the Kidney	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	Sem, Lec, Pan, O, AV	6	11/19/58	11/19/58	C; 1 day	20
Arthritis and Rheumatism	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	PD, Sem, Lec, Pan, O, AV	6	Mar/59	Mar/59	C; 1 day	Unknown
855—Intensive Review of Internal Medicine	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33	S Lim 50	IC	Lec, AV	40	9/22/58	10/ 4/58	C; 10 days	65
858—Bedside Clinics in Internal Medicine	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33	G	II	PD, LC, BR, Lec, Pan	24	10/ 2/58	1/ 8/59	I; 12 sessions 2 hr. weekly, Thursdays	65
872—Workshops in Water and Electrolyte Balance	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33; course at Hotel Statler, Los Angeles	G Lim 100	IC	PD, Sem, Surg, Pan	24	11/14/58	11/16/58	C; 3 days	75

8th Annual Symposium of San Diego County Heart Association	San Diego County Heart Association 1651 Fourth Ave., San Diego, Calif.; course at U. S. Naval Hospital, San Diego 34, Calif.	B	IC	PD, Lec, Pan, O, AV	6	10/31/58	10/31/58	C; 1 day	5
A Series of Postgraduate Medical Programs	U. S. Veterans Administration Hospital (Fort Miley) 42nd Ave., and Clement St., San Francisco	G Lim 300	II	Lab, PD, LC, Sem, Lec, Pan	12	4/59	5/59	I; 6 sessions 2 hr. weekly, Tuesdays	15 for Academy Members; 20 Non-members
Internal Medicine—Selective Review	University of California Medical Center Second and Parnassus Ave., San Francisco	G Lim 100	IC	PD, Lec, Pan, O, AV		9/13/58	9/17/58	C; 5 days	100
Postgraduate Course for Physicians	Contra Costa County Heart Association 2093 N. Main St., Walnut Creek, Calif.; course at Contra Costa County Hospital, Martinez, Calif.	G Lim 75	II	Lec, O.	16	2/ 2/59	4/ 6/59	I; 8 sessions 2 hr. weekly, Mondays	10
Pathophysiology of Fluid and Electrolyte Balance	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	II	Sem, Lec		9/58	12/58	I; 11 sessions 1½ hr. weekly	10
Problems in Cardio-Pulmonary Diseases	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	IC	PD, Sem, Lec, Pan, O, TV	16	10/16/58	10/18/58	C; 3 days	35
Recent Advances in Internal Medicine	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B Lim 120	IC	Lec, Pan, O, AV	40	6/59	6/59	C; 5 days	Unknown
Present Concepts in Internal Medicine	Department of the Army Office of the Surgeon General Personnel and Training Division Washington 25, D. C.; course at Letterman Army Hospital, San Francisco	G Lim 100	IC	Lab, LC, Sem, Lec, Pan, O, AV	35	10/27/58	10/31/58	C; 5 days	Nil
Seminar in Internal Medicine—Hematology and Gastrointestinal Disorders	University of Florida, College of Medicine Division of Postgraduate Education J. Hillis Miller Health Center Gainesville, Fla.	B	IC	Lab, PD, Clin C, Sem, Lec, Pan, O, AV	15	3/59		C; 2½ days	25
Professor Pro Tempore in Medicine	Mt. Sinai Hospital of Greater Miami 4300 Alton Rd., Miami Beach 40, Fla.	G Lim 150	IC	PD, LC, BR, Clin C, Lec, Pan, O	18	9/58	5 days later	C; 5 days	Nil
Seminar in Diabetes and Related Disorders	President, Florida Diabetes Association P. O. Box 487, Tallahassee, Fla.	B	IC	Clin C, Sem, Lec, Pan, O	12	10/58		C; 2 days	15
Internal Medicine for the Internist	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	S Lim 50	IC	Sem, Lec, O	41	9/29/58 4/20/59	10/ 4/58	C; 6 days	125
Course II in Internal Medicine	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 30	IC	Lab, PD, LC, BR, Clin C, Lec, O, AV, EPP	80	10/20/58 5/11/59	11/ 1/58	C; 12 days	125
Fluid and Electrolyte Balance	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	G	IC	Lec, Pan, O, AV	7	12/18/58	12/18/58	C; 1 day	10
Treatment of Hypertension	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	G	IC	Lec, Pan, O, AV	7	4/30/59	4/30/59	C; 1 day	10
Internal Medicine	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks	G	IC	PD, LC, BR, Sem, Lec, Pan, O, AV, TV	28	11/10/58	11/13/58	C; 4 days	60
Emergencies in Medicine	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	B Lim 50	IC	Sem, Lec, Pan	28	1/28/59	1/31/59	C; 3½ days	25
Internal Medicine 2	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Boston City Hospital, Boston	S Lim 10	IC	Lab, PD, BR, Clin C, Lec		9/ 8/58	12/ 5/58	C; 65-70 days	400
Diabetes and Endocrinology in Relation to General Medicine	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at New England Deaconess Hospital, Boston 15	G Lim 35	IC	PD, LC, BR, Clin C, Sem, Lec, O, AV	21	10/ 6/58	10/ 8/58	C; 3 days	30
Recent Advances in Internal Medicine	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Peter Bent Brigham Hospital, Boston 15	S Lim 125	IC	Lab, PD, Clin C, Lec	38	6/ 1/59	6/ 6/59	C; 6 days	125
Internal Medicine 3	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Massachusetts General Hospital, Boston 14	G Lim 35	IC	PD, Clin C, Lec	180	6/15/59	7/25/59	C; 36 days	300
Review of Recent Advances in Internal Medicine	New England Center Hospital 171 Harrison Ave., Boston	S Lim 100	IC	PD, LC, Clin C, Sem, Lec, Pan, O	33	10/ 6/58	10/11/58	C; 5½ days	50
Clinical Internal Medicine	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G Lim 70	II	PD, Clin C, Lec, Pan, AV	67	10/ 3/58	2/26/59	I; 19 sessions 3½ hr. weekly, Thursdays	65
Recent Advances in Therapeutics	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G Lim 60	IC	PD, Clin C, Lec, Pan, O, AV	35	3/23/59	3/27/59	C; 5 days	50

Key will be found on page 1954

INTERNAL MEDICINE—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Rheumatology	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G Lim 60	IC	PD, Clin C, Lec, Pan, O, AV	30	4/20/59	4/24/59	C; 5 days	50
Metabolism and Endocrinology	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G Lim 60	IC	PD, Clin C, Lec, Pan, O, AV	35	4/27/59	5/ 1/59	C; 5 days	50
Medical Seminars	Highland Park General Hospital 369 Glendale Ave., Highland Park, Mich.	G Lim 30	II	PD, LC, Clin C, Sem, Lec, Pan, O, AV	25	10/ 1/58	3/15/59	I; 1 hr. weekly, Wednesdays	Unknown
Internal Medicine for Internists	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	S	IC	Lec, O, AV	15	3/16/59	3/18/59	C; 3 days	40
Basic Concepts of Water and Electrolyte Balance	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	IC	Lec, O, AV	30	3/30/59	4/ 3/59	C; 5 days	65
Recent Advances in Internal Medicine	St. Michael's Hospital 306 High St., Newark, N. J.	G Lim 50	II	PD, LC, BR, Clin C, Lec, O, AV	30	9/58	2/59	I; 10 sessions 2 hr. weekly, Wednesdays	25
Clinical Pharmacology and Therapeutics	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at St. Elizabeth Hospital, Elizabeth, N. J.	G Lim 50	II	Lec, O, AV	15	Unknown		I; 10 sessions 1½ hr. weekly, Wednesdays	50
Modern Concepts in Internal Medicine	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Elizabeth General Hospital, Elizabeth, N. J	G Lim 50	II	Lec, O, AV	15	Unknown		I; 10 sessions 1½ hr. weekly	50
Modern Concepts in Internal Medicine	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Fitkin Memorial Hospital, Neptune, N. J.	G Lim 50	II	Lec, O, AV	15	9/30/58	12/ 2/58	I; 10 sessions 1½ hr. weekly, Tuesdays	50
Recent Advances in Internal Medicine and Therapeutics	Middlesex General Hospital 180 Somerset St., New Brunswick, N. J.	G	II	Sem, Lec, O	72	9/17/58	6/24/59	I; 36 sessions 2 hr. weekly, Wednesdays	100 (interns and residents of outside hospitals 25)
Metabolic Aspects of Renal Disorders	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	IC	PD, LC, Clin C, Sem, AV	6	11/13/58	11/13/58	C; 1 day	12
Nutritional Metabolic Problems	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	IC	PD, LC, Clin C, Sem, O, AV	6	12/ 4/58	12/ 4/58	C; 1 day	12
Acute and Chronic Pyelonephritis	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	IC	PD, LC, Clin C, Sem, O, AV	6	1/15/59	1/15/59	C; 1 day	12
Recent Advances in Medicine	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	IC	PD, LC, Clin C, Sem, O, AV	6	2/19/59	2/19/59	C; 1 day	12
Arthritis	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	IC	PD, LC, Sem, Lec, Pan, O, AV	14	10/ 1/58	10/ 2/58	C; 2 days	30
Recent Advances in Chest Diseases	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	IC	PD, LC, Sem, Lec, Pan, O, AV	14	10/22/58	10/23/58	C; 2 days	30
Disorders of the Liver—Part of course entitled "Application of Modern Medicine to Everyday Practice"	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N. Y.; course at Doctors Hospital Freeport, N. Y.	G Lim 30	II	Sem	9	10/28/58	12/ 2/58	I; 6 sessions 1½ hr. weekly, Tuesdays	18
Rheumatic Fever and Rheumatic Heart Disease	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N. Y.; course at Meadowbrook Hospital, East Meadow, N. Y.	G	II	Lec	6	10/31/58	11/21/58	I; 4 sessions 1½ hr. weekly, Fridays	10
Diabetes—Part of course entitled "Application of Modern Medicine to Everyday Practice"	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N. Y.; course at Doctors Hospital Freeport, N. Y.	G Lim 30	II	Sem	6	12/ 9/58	1/ 6/59	I; 4 sessions 1½ hr. weekly, Tuesdays	12
Physical Diagnosis and Recent Advances in Internal Medicine	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N. Y.; course at Meadowbrook Hospital, East Meadow, N. Y.	G Lim 5	II	BR, Clin C	20	2/19/59	4/23/59	I; 10 sessions 2 hr. weekly, Thursdays	20
Current Trends in Internal Medicine	Long Island Jewish Hospital 270-05 76th Ave., New Hyde Park, N. Y.	G Lim 40	II	PD, Lec	16	2/ 1/59	2/28/59	I; 8 sessions 2 hr. twice weekly, Tuesdays, Thursdays	25

Management of Diabetes Mellitus and its Complications	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Jewish Chronic Disease Hospital, Brooklyn, N. Y.	G Lim 30	II	PD, Lec	8	10/58	12/58	I: 8 sessions 1 hr. weekly, Thursdays	20
Recent Advances in Internal Medicine	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Kings County Hospital, Brooklyn, N. Y.	G Lim 40	II	Lec, O	15	10/58	12/58	I: 10 sessions 1½ hr. weekly, Wednesdays	30
Modern Therapeutics in Internal Medicine	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Coney Island Hospital, Brooklyn, N. Y.	G Lim 30	II	Lec	15	4/59	6/59	I: 10 sessions 1½ hr. weekly, Thursdays	30
Diabetes and Basic Metabolic Problems	American Diabetes Association, Inc. One E. 45th St., New York 17; course at The Chase-Park Plaza Hotels St. Louis 8	G Lim 250	IC	Sem, Lec, Pan	20	1/21/59	1/23/59	C; 3 days	50 members; 100 nonmembers
Medicine PM 74—Internal Medicine	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	II	PD, BR, Sem, Lec, EPP	76	9/23/58 2/ 3/59	1/27/59	I: 19 sessions 4 hr. weekly, Tuesdays	150
Medicine PM 80—Diseases of the Chest	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Bellevue Hospital, New York	G Lim 6	IC	BR, Clin C, Lec, O, AV	140	10/ 1/58 2/ 2/59	10/31/58	C; 20 days	125
Medicine PM 50—Diseases of the Liver	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	II	PD, BR, Lec, O, AV	39	10/ 6/58	12/29/58	I: 13 sessions 3 hr. weekly, Mondays	100
Medicine PM 81—Arthritis	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Hospital for Joint Diseases New York 35	G	IC	Lab, LC, Lec, O, AV	16½	10/23/58 4/23/59	10/25/58	C; 3 days	100
Medicine PM 49—Office Management of Diseases of Metabolism	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	IC	PD, Lec, Pan, O, AV	14	11/14/58	11/15/58	C; 2 days	50
Medicine PM 71—Diseases of the Chest	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	S	II	Sem, Lec, O, AV	50	1/ 6/59	5/26/59	I: 20 sessions 2½ hr. weekly, Tuesdays	100
Arthritis	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 8	II	Lab, PD, LC, BR, Clin C, Lec, O	16	10/ 1/58 4/ 1/59	10/31/58	I: 8 sessions 2 hr. twice weekly, Tuesdays, Fridays	50
5439-A. Tutorial Course in Internal Medicine	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 1	PT	Lab, PD, Clin C, Lec, O		Arranged		Arranged	150 per mo.
542-A. Clinical Internal Medicine	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	II	PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV	48, 96 or 144	9/ 4/58 1/ 8/59 3/ 5/59	3, 6 or 9 mo. later	4 hr. weekly, Thursdays	60 for 3 mo.
548-A. Problems in Clinical Medicine	New York University Post-Graduate Medical School 550 First Ave., New York 16	G	II	PD, LC, Clin C, Lec, O, AV, EPP	75	10/31/58	4/24/59	I: 25 sessions 3 hr. weekly, Fridays	75
5410-A. Arthritis and Allied Rheumatic Disorders	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 35	IC	PD, LC, BR, Lec, O, AV	35	11/10/58 6/ 8/59	11/14/58	C; 5 days	85
5411-A. Diabetes Mellitus, Hypertension and Hypoglycemia	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 40	IC	PD, Lec, Pan, O	21	11/10/58	11/12/58	C; 3 days	50
5419-A. Seminar in Internal Medicine	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	IC	PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV	280	4/ 6/59	5/29/59	C; 40 days	250
5420-A. Treatment of Renal Failure and Hypertension	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 40	II	Sem, Lec	24	4/ 6/59	5/25/59	I; 8 sessions 3 hr. weekly, Mondays	35
5422-A. Acute and Chronic Diseases of the Chest	New York University Post-Graduate Medical School 550 First Ave., New York 16	G	II	Clin C, Lec, Pan, O, AV	16	4/ 6/59	5/25/59	I; 8 sessions 2 hr. weekly, Mondays	40

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INTERNAL MEDICINE—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
5423-A. Arthritis and Allied Rheumatic Disorders	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 35	II	PD, LC, BR, Lec, O, AV	24	4/ 7/59	5/26/59	I; 8 sessions 3 hr. weekly, Tuesdays	55
5427-A. Diseases of the Liver and Biliary Tract	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 15	II	PD, LC, Clin C, Lec, Pan, O	16	4/ 8/59	5/27/59	I; 8 sessions 2 hr. weekly, Wednesdays	45
5431-A. Problems in Diagnosis	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	II	PD, Lec, Pan, O, EPP	14	4/10/59	5/29/59	I; 8 sessions 1¾ hr. weekly, Fridays	35
5435-A. Symposium on Modern Therapeutics in Internal Medicine	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	IC	PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV, EPP	70	6/ 8/59	6/19/59	C; 10 days	100
5437-A. The Management of Chronic Kidney Disease	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 30	IC	Clin C, Lec, Pan, O	14	6/22/59	6/23/59	C; 2 days	35
5438-A. The Management of Hypertension	New York University Post-Graduate Medical School 550 First Ave., New York 16	G	IC	Lab, Lec, O	14	6/24/59	6/25/59	C; 2 days	35
New Therapeutics	Rochester General Hospital 501 W. Main St., Rochester, N. Y.	G	IC	Lec, Pan, AV	6	3/26/59	3/26/59	C; 1 day	5
Internal Medicine	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	G	II	Sem, Lec, O, AV	21	4/ 9/59	5/21/59	I; 7 sessions 3 hr. weekly, Thursdays	15
A Review of Diabetes and Metabolic Diseases	Duke University School of Medicine Durham, N. C.	G	IC	Lab, PD, LC, BR, Sem, Lec	Unknown	3/59			Unknown
North Dakota Academy of General Practice Refresher Course—Recent Concepts of Cardiovascular and Liver Diseases	University of North Dakota School of Medicine Grand Forks, N. D.	G	IC	Lec, Pan	10	11/21/58	11/22/58	C; 2 days	Unknown
Selected Topics in Internal Medicine	Registrar, School of Medicine, Western Reserve University 2109 Adelbert Rd., Cleveland; course at University Hospitals of Cleveland, Cleveland	S Lim 80	II	PD, Clin C, Lec, Pan, O, AV	24	3/ 4/59	4/22/59	I; 8 sessions 3 hr. weekly, Wednesdays	30
Sessions in Rheumatic Diseases	Ohio State University College of Medicine 11th and Neil Aves., Columbus 10, Ohio	G	IC	PD, LC, Clin C, Lec, Pan	8	10/18/58	10/19/58	C; 2 days	Nil
Metabolic Disorders	Dr. Gaston B. Hannah Southwestern Ohio Society of General Physicians Sharon and Willow Aves., Glendale, O.; course at Hartwell Country Club, Cincinnati	G	IC	Sem, Lec, Pan, O, AV	5	1/18/59	1/18/59	C; 1 day	10
Advance in Arthritis and Related Disorders—2nd Oklahoma Colloquy	University of Oklahoma Medical Center 801 N.E. 13th St., Oklahoma City	S Lim 300	IC	PD, LC, Clin C, Lec, Pan, O, AV	21	11/12/58	11/15/58	C; 4 days	25 for entire course; 10 per day
Fifth Annual Surgery, Radiology, Pathology Symposium	University of Oklahoma Medical Center 801 N.E. 13th St., Oklahoma City	S	IC	PD, LC, Clin C, Sem, Lec, Pan, O, AV	12	5/ 8/59	5/ 9/59	C; 2 days	20
The Physiological Basis of Internal Medicine	American College of Physicians 4200 Pine St., Philadelphia 4; course at Duke University School of Medicine, Durham, N. C.	S Lim 90	IC	Lec, O, AV	35	10/13/58	10/17/58	C; 5 days	Unknown
Physiological Basis of Internal Medicine	American College of Physicians 4200 Pine St., Philadelphia 4; course at Duke University School of Medicine, Durham, N. C.	S	IC	Lec, Pan, O, AV	35-40	10/13/58	10/17/58	C; 5 days	30 A.C.P. members; 60 nonmembers
Recent Advances in Internal Medicine	American College of Physicians 4200 Pine St., Philadelphia 4; course at University of Colorado School of Medicine, Denver	S	IC	Clin C, Lec, Pan, O, AV	35-40	6/15/59	6/19/59	C; 5 days	30 A.C.P. members; 60 nonmembers
Recent Developments in Internal Medicine	American College of Physicians 4200 Pine St., Philadelphia 4; course at University of Cincinnati College of Medicine, Cincinnati	S	IC	Clin C, Lec, Pan, O, AV	35-40	6/59		C; 5 days	30 A.C.P. members; 60 nonmembers
Diabetes and Hypoglycemia	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G Lim 100	IC	PD, Sem, Lec, Pan	Unknown	3/23/59	3/25/59	C; 3 days	75

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Renal Disease	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G Lim 8	II	Lec, AV	16	9/58	1/59	I; Unknown	25
Metabolic Diseases	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	II	Lec	10	10/58	12/58	I; 10 sessions 1 hr. weekly	25
Diseases of the Chest	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G Lim 5	II	Sem, Lec, O, AV	15	10/ 6/58	1/26/59	I; 15 sessions 1 hr. weekly, Mondays	30
Rheumatic Diseases and Allied Conditions	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G Lim 10	II	Lec, Pan, AV	Unknown	1/19/59	5/59	I; Unknown	45
A Postgraduate Review in Medicine	Vanderbilt University School of Medicine 21st Ave. South, Nashville, Tenn.	G	IC	PD, LC, Clin C, Lec, Pan, O	6	Spring/59	Spring/59	C; 1 day	15
Fluid and Electrolyte Balance	University of Washington School of Medicine Seattle 5	G Lim 40	IC	Lab, PD, Sem, Lec, O, EPP	22½	9/24/58	9/27/58	C; 3½ days	45
Changing Attitudes in Coronary Heart Disease and Disorders of the Heart and Lungs	University of Washington School of Medicine Seattle 5	G Lim 500	IC	Sem, Lec, O	9	10/17/58	10/18/58	C; 2 days	Unknown
Hematology and Hypertension	Assistant to the Dean University of Wisconsin Medical School 418 N. Randall Ave., Madison 6, Wis.	S Lim 100	IC	PD, Lec, Pan, O, AV	18	4/ 9/59	4/11/59	C; 2½ days	30

MALIGNANT DISEASE

(See also Gynecology, Pathology)

Rocky Mountain Cancer Conference	Colorado State Medical Society 885 Republic Bldg., Denver 2; course at Shirley Savoy Hotel, Denver	G	IC	Lec, Pan	Unknown	7/ 9/59	7/10/59	C; 2 days	Nil
Cancer Cytology	The Cancer Institute at Miami 1155 Northwest 14th St., Miami, Fla.	G	IC or PT	Lab, PD, Sem, Lec, Pan, O, AV, EPP		any time		Arranged	150 1 mo. 350 6 mo. 450 12 mo.
Cancer Seminar	Florida State Board of Health 1217 Pearl St., Jacksonville, Fla.; course at Tampa Hotel, Tampa, Fla.	G	IC	Sem	15	11/19/58	11/21/58	C; 3 days	Nil
Symposium on Malignancy	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	G	IC	Lec, Pan, O, AV	8	3/31/59	4/ 1/59	C; 2 days	Nil
Cancer Seminar	University of Mississippi Medical Center, Secretary, Postgraduate Education Committee 2500 N. State St., Jackson, Miss.	G Lim 150	IC	PD, Clin C, Sem, Lec, Pan, O, AV	7	12/ 4/58	12/ 4/58	C; 1 day	Nil
Medicine PM 72-Neoplastic Diseases	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	II	PD, Sem, Lec, O, AV	76	9/ 9/58 1/27/59	1/20/59	I; 18 sessions 4 hr. weekly, Tuesdays	150
Diagnosis and Management of Early Cancer	Memorial Center for Cancer and Allied Diseases 444 E. 68th St., New York 21	G Lim 20	IC	PD, LC, Sem, Lec, Pan, O, AV, EPP	24	9/29/58	10/ 1/58	C; 3 days	40
Malignant Disease	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	B	II	PD, LC, Lec, Pan, O, AV	21	Spring/59		Unknown	15
Status of Cancer Chemotherapy	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at The University of Texas M.D. Anderson Hospital, Houston, Tex.	B Lim 270	IC	PD, Lec, Pan	10	11/14/58	11/15/58	C; 2 days	5
13th Annual Symposium on Fundamental Cancer Research	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at The University of Texas M.D. Anderson Hospital, Houston, Tex.	B Lim 270	IC	Lec, Pan	15	3/ 5/59	3/ 7/59	C; 3 days	5

NEUROLOGY

(See also Anatomy, Basic Sciences, Electroencephalography, Neurology and Psychiatry, Pathology, Pediatrics, Surgery)

Physiological and Clinical Aspects of the Nervous System	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	Sem, Lec, Pan, O, AV	6	1/14/59	1/14/59	C; 1 day	20
Clinical Neurology	University of California Medical Center Second and Parnassus Ave., San Francisco	G Lim 100	IC	Lec, Pan, O, AV	14	4/59		C; 2 days	40
10th Western Institute on Epilepsy	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	IC	Lec, Pan, O, AV	16	10/30/58	11/ 1/58	C; 3 days	35

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NEUROLOGY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Clinical Neurology	Program Director, Connecticut Postgraduate Seminar in Psychiatry and Neurology Connecticut State Hospital, Middletown, Conn.; course at Yale University School of Medicine, New Haven, Conn.	S Lim 40 to 50	II	Lec, O	22	9/22/58	12/ 1/58	I; 22 sessions 1 hr. weekly, Mondays	Nil
Pediatric Neurology	Program Director, Connecticut Postgraduate Seminar in Psychiatry and Neurology Connecticut State Hospital, Middletown, Conn.; course at Yale University School of Medicine, New Haven, Conn.	S Lim 60	II	Lec, O	6	12/ 1/58	12/ 8/58	I; 6 sessions 1 hr. weekly, Mondays	Nil
The Neuromuscular Diseases of Children With Special Emphasis on Cerebral Palsy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	S Lim 30	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV	80	7/ 6/59	7/17/59	C; 11 days	250
Neurology Conference	State University of Iowa College of Medicine University Hospitals, Iowa City	G	IC	PD, LC, Lec, Pan, O, AV, EPP	6	3/19/59	3/19/59	C; 1 day	15
Neurological Medicine	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Boston City Hospital, Boston	S Lim 20	IC	Lab, PD, Lec	38	6/ 1/59	6/ 6/59	C; 6 days	100
Neurology	New England Center Hospital 171 Harrison Ave., Boston	S Lim 50	IC	PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV	20	4/29/59	5/ 2/59	C; 4 days	Unknown
Lecture Course in Neurology	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N. Y.; course at Meadowbrook Hospital, East Meadow, N. Y.	G Lim 25	II	Lec	6	10/ 1/58	11/ 5/58	I; 6 sessions 1 hr. weekly, Wednesdays	15
Neurology PM 61—Advanced Neurology	Assistant Dean for Postgraduate Medical Education Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	S	IC	PD, LC, Sem, O, AV, EPP	420	Arranged every 3 mo.		3 mo. 5 days weekly, may be extended in 3 mo. units	150
Cerebral Palsy PM 1	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Columbia-Presbyterian Medical Center, New York 32	G	IC	LC, Lec, Pan, O, AV	105	10/13/58 3/ 2/59	10/31/58	C; 15 days	100
Neurology PM 60-Review of Neurology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	S	II	Lab, PD, Lec, O, AV	48	11/ 3/58	11/29/58	I; 16 sessions 3 hr. 4 times wk., Mondays, Wednesdays, Fridays, Saturdays	150
Neurology PM 30-Clinical Neurology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	IC	PD, Sem, Lec, O, AV	30	3/30/59	4/ 3/59	C; 5 days	75
557-A. Seminar on Epilepsy	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 30	II	Lec, O, AV	6	9/ 3/58	10/ 8/58	I; 6 sessions 1 hr. weekly, Wednesdays	35
Review of Neurology	Inquire of: Dr. Geoffrey Osler 11 E. 68th St., New York 21; course at Goldwater Memorial Hospital and Manhattan State Hospital, New York	S Lim 24	II	Lab, PD, LC, Lec, AV	100	9/17/58	12/10/58	I; 40 sessions 2½ hr. 5 days a week, Mondays, Tuesdays, Wednesdays, Fridays, Sundays	175

NEUROLOGY AND PSYCHIATRY

Psychiatry PM 1	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Columbia-Presbyterian Medical Center, New York 32	S	IC	Lab, PD, Lec, O, AV	400	10/ 6/58	12/12/58	C; 50 days	300
647-A. Neurology and Psychiatry	New York University Post-Graduate Medical School 550 First Ave., New York 16	G	IC	PD, LC, Lec	420	9/15/58	12/ 5/58	C; 12 wk.	300
716 Basic Psychiatry and Neurology	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S Lim 25	II	LC, Lec	24	10/ 3/58 2/13/59	1/23/59	I; 16 sessions 1½ hr. weekly, Fridays	60

Refresher Course in Neuropsychiatry	Ohio State University College of Medicine 11th and Neil Aves., Columbus 10, Ohio; course at Columbus Psychiatric Institute and Hospital, Columbus, Ohio	S Lim 10	IC	PD, LC, BR, Clin C, Sem, Lec, O, AV, EPP	80	11/ 3/58	11/28/58	C; 20 days	Nil
Neurology-Psychiatry Lectures	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G	II	Lec	30	9/58	5/59	I; 30 sessions 1 hr. weekly, Tuesdays	50
				OBSTETRICS (See also Infertility)					
Postgraduate Obstetric-Pediatric Seminar	Florida State Board of Health—Bureau of Maternal and Child Health P. O. Box 210, Jacksonville 1, Fla.; course at Daytona Plaza Hotel, Daytona Beach, Fla.	G Lim 425	IC	Sem, Lec, Pan, O, AV	15	9/ 8/58	9/10/58	C; 3 days	Nil
Course I in Obstetrics	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 14	IC	Lab, PD, LC, BR, Clin C, Surg, Lec, O, AV, EPP	75	9/22/58 10/27/58 2/23/59 3/30/59 5/ 4/59	10/ 4/58	C; 12 days	150
Obstetrics	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	IC	PD, LC, Lec, Pan, O, AV	18	11/ 3/58	11/ 5/58	C; 3 days	40
Clinical Obstetrics	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Boston Lying-in Hospital, Boston	G Lim 6	IC	PD, LC, BR, Clin C	120-130	10/ 1/58 11/ 1/58 4/ 1/59 5/ 1/59	10/31/58	C; 27 days	150
Obstetrics for Specialists	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	S	IC	Lec, O, AV	15	10/ 6/58	10/ 8/58	C; 3 days	40
Obstetrics	Office of Postgraduate Affairs University of Nebraska College of Medicine 42nd and Dewey, Omaha; course at Lincoln General Hospital, Lincoln, Neb.	G	IC	Clin C, Sem, Lec, Pan, O, AV	6	3/26/59	3/26/59	C; 1 day	10
Seventh Annual Spring Postgraduate Assembly	Office of Postgraduate Affairs University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	IC	Sem, Lec, Pan, O, AV	18	4/15/59	4/17/59	C; 3 days	30
Modern Concepts in Obstetrics	Seton Hall College of Medicine and Dentistry, Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at St. Mary's Hospital, Passaic, N. J.	G Lim 50	II	Lec, O, AV	18	Unknown		I; 12 sessions 1½ hr. weekly	50
Obstetrics—65 CM	Department of Postgraduate Medical Education, Seton Hall College of Medicine and Dentistry, 31 Clinton St., Newark 2, N. J.; course at Margaret Hague Hospital, Jersey City, N. J.	G	PT	Lab, PD, LC, BR, Clin C, Lec, EPP		Arranged	3 months later	90 days	350
Obstetrics—66 CM	Department of Postgraduate Medical Education, Seton Hall College of Medicine and Dentistry, 31 Clinton St., Newark 2, N. J.; course at Margaret Hague Hospital, Jersey City, N. J.	G	PT	Lab, PD, BR, Clin C, Lec, EPP		Arranged	1 month later	30 days	100
Obstetrics P.M. 80	Department of Postgraduate Medical Education Seton Hall College of Medicine and Dentistry 31 Clinton St., Newark 2, N. J.; course at Margaret Hague Maternity Hospital, Jersey City, N. J.	G	II	Lab, LC, BR, Clin C, Lec, EPP	30	Arranged	3 mo. later	I; 1 day each wk.	350
Modern Concepts in Obstetrics	Seton Hall College of Medicine and Dentistry, Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Mercer Hospital, Trenton, N. J.	G Lim 50	II	Lec, O, AV	18	1/59		I; 12 sessions 1½ hr. weekly	50
Obstetrics	University of Buffalo School of Medicine 3435 Main St., Buffalo	G Lim 16	IC	PD, Sem, Lec, O, AV	14	3/11/59	3/12/59	C; 2 days	30
Forceps Course (Manikin)	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 10	II	PD, LC, BR, Clin C, Lec, O, AV	24	10/ 1/58 4/ 1/59	11/12/58	I; 12 sessions 2 hr. twice a week, Wednesdays, Fridays	150
Obstetrics	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	G Lim 2	IC	PD, LC, BR, Sem, Lec, O, AV	40	Arranged	Arranged	C; 5 days	25

Key will be found on page 1954.

OBSTETRICS AND GYNECOLOGY

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Obstetrics and Gynecology Traineeship	University of Arkansas Medical School Department of Obstetrics and Gynecology 4301 W. Markham, Little Rock, Ark.	G Lim 3	PT	PD, LC, BR, Clin C, Sem, Surg, Lec, Pan, O, AV, TV, EPP		Arranged		Arranged	Unknown
Obstetrics and Gynecology	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	PD, Sem, Lec, Pan, O, AV	12	11/14/58	11/15/58	C; 2 days	50
Obstetrics and Gynecology	University of California Medical Center Second and Parnassus Ave., San Francisco	G Lim 100	IC	Lec, Pan, O, AV	21	9/18/58	9/20/58	C; 3 days	50
Obstetrics and Gynecology	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	S Lim 50	IC	Sem, Lec, Pan, O, AV	6	6/59	6/59	C; 3 days	30
Obstetrics and Gynecology	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	G	IC	Lec, Pan, O, AV	12	3/ 4/59	3/ 5/59	C; 2 days	20
Obstetrics and Gynecology	State University of Iowa College of Medicine University Hospitals, Iowa City	B	IC	PD, BR, Lec, Pan, O, AV	6	1/14/59	1/14/59	C; 1 day	15
Pathology of Obstetrics and Gynecology	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Free Hospital For Women, Brookline, Mass.	S Lim 12	II	Lab, Lec	144	1/ 8/59	5/21/59	I; 20 sessions 7 hr. weekly, Thursdays	150
Obstetrics and Gynecology	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G Lim 60	IC	PD, Clin C, Lec, Pan, O, AV	18	1/28/59	1/30/59	C; 3 days	30
Obstetrics and Gynecology	Office of Postgraduate Affairs University of Nebraska College of Medicine 42nd and Dewey, Omaha 5	G	IC	Clin C, Sem, Lec, Pan, O, AV	12	1/15/59	1/16/59	C; 2 days	20
In Hospital Review In Obstetrics and Gynecology	University of Nebraska College of Medicine 42nd and Dewey, Omaha 5	G Lim 5	PT	PD, LC, BR, Clin C, Sem, Surg, O, AV,EPP	40	Spring/59		5½ days	50
Recent Advances in Obstetrics and Gynecology	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	II	PD, LC, Clin C, Sem, O, AV	16	2/26/59	3/19/59	I; 4 sessions 4 hr. weekly, Thursdays	20
Gynecology and Obstetrics Including Manikin Obstetrics and Operative Gynecology (Cadaver)	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 10	IC	Lab, PD, LC, BR, Clin C, Lec, O, AV	400	10/ 1/58 4/ 1/59	11/30/58	C; 56 days	250
5619-A, X-Ray Diagnosis in Obstetrics and Gynecology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 10	IC	PD, Lec, O, AV	35	10/20/58	10/24/58	C; 5 days	85
Obstetrical-Gynecological Symposium	University of Oklahoma Medical Center 801 N. E. 13th St., Oklahoma City	B	IC	PD, Sem, Lec, Pan, O, AV	8	3/ 7/59	3/ 7/59	C; 1 day	5
Obstetrics and Gynecology Postgraduate Course	Hahnemann Hospital and Medical College 225 N. Broad St., Philadelphia	G Lim 30	II	Lab, PD, Clin C, Pan, O, AV	24	9/24/58	12/10/58	I; 12 sessions 2 hr. weekly, Wednesdays	50
A Postgraduate Review in Obstetrics-Gynecology	Vanderbilt University School of Medicine 21st Ave. South, Nashville, Tenn.	G	IC	PD, LC, Clin C, Lec, Pan, O	6	Winter/ 1958-59	Winter/ 1958-59	C; 1 day	15
General Review of Obstetrics and Gynecology	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at University of Texas M.D. Anderson Hospital, Houston, Tex.	G	II	Lec, Pan, AV	9	12/ 2/58	12/16/58	I; 3 sessions 3 hr. weekly, Tuesdays	30

OCCUPATIONAL MEDICINE

(See also General Practice, Radiology)

Aviation Medicine	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	Sem, Lec, Pan, O, AV	18	10/22/58	10/24/58	C; 3 days	75
Multidisciplinary Approach to the Problems of Athletic Injuries	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	Lec, Pan, O, AV	12	12/19/58	12/20/58	C; 2 days	10
The Prevention and Management of Athletic Injuries	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B	IC	PD, Lec, Pan, O, AV	24	8/59	8/59	C; 3 days	35
Clinical Physical Medicine and Athletic Injuries	State University of Iowa College of Medicine University Hospitals, Iowa City	G	IC	PD, LC, BR, Lec, Pan, O, AV	9	11/21/58	11/22/58	C; 2 days	20
Clinical Traineeship in Public Health and Preventive Medicine	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 2	PT	PD, LC, BR, Clin C, Sem, Lec, O, AV	Varies	Arranged		Arranged	50 per mo. in state; 100 per mo. out of state

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School Health	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	IC	Sem, Lec, Pan, O, AV	7	10/ 9/58	10/ 9/58	C; 1 day	Nil
Extension Course in Public Health Qualifying for Grade II Local Health Officer in New York State	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	II and HS	Sem, Lec, O, HS	30	any time	1 yr. later	Combination HS and I one day sessions for 6 days	25
Occupational Medicine 207—Public Health Aspects of Radiation	Columbia University School of Public Health and Administrative Medicine 600 W. 168th St., New York 32	G	II	Lec, O, AV		Arranged		Arranged	30
Occupational Medicine 202—Occupational Diseases	Columbia University School of Public Health and Administrative Medicine 600 W. 168th St., New York 32	G	II	Lec, O, AV	24	2/ 2/59	3/28/59	I; 8 sessions 3 hr. weekly, day to be arranged	30
Institute for Physicians in Industry	School of Public Health and Administrative Medicine, Columbia University 600 W. 168th St., New York 32	S	IC	Sem, Lec, Pan, O	36	2/ 6/59	2/10/59	C; 5 days	108
Occupational Medicine 203—Industrial Medical Organization	Columbia University School of Public Health and Administrative Medicine 600 W. 168th St., New York 32	G	II	Lec, O, AV	13½	3/30/59	5/28/59	I; 9 sessions 1½ hr. weekly, day to be arranged	30
Bureau of School Health Pre-Service Training Course	Dr. Robert S. Culbert, Director Department of Health 125 Worth St., New York 14; course at Kips Bay Health Center, New York	G Lim 40	IC	LC, Sem, EPP	90	9/58 3/59 5/59	Approximately 6 wk. later	C; 30 days	Nil
481I-A. Special Topics in Industrial Hygiene Laboratory Methods	New York University Post-Graduate Medical School 550 First Ave., New York 16	B	IC or II	Lab		Arranged		Arranged	Arranged
482-A. Industrial Hygiene	New York University Post-Graduate Medical School 550 First Ave., New York 16	G and non-Physicians Lim 30	II	Lab, Lec		9/58	15 wk. later		90
489-A. Chemical Methods in Industrial Hygiene	New York University Post-Graduate Medical School 550 First Ave., New York 16	G and non-Physicians Lim 10	II	Lab, Lec, AV		9/58	15 wk. later		100
488-A. Occupational Medicine for Physicians	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 30	IC	Sem, Lec, Pan, AV	280	9/15/58	11/ 7/58	C; 40 days	350 plus 25 for Field Trip
Occupational Health for Physicians	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 50	II	PD, Clin C, Sem, Lec, AV	90	9/18/58	5/14/59	I; 30 sessions 3 hr. weekly, Thursdays	300
481-A. Medical Aspects of Compensation	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 100	IC	Sem, Lec, Pan, AV	35	10/20/58	10/24/58	C; 5 days	45
1813-A. Radiochemical Analysis	New York University Post-Graduate Medical School 550 First Ave., New York 16	G	IC	Lab, Lec, AV	70	11/10/58	11/21/58	C; 10 days	90
486-A. Air Pollution	New York University Post-Graduate Medical School 550 First Ave., New York 16	G and non-Physicians Lim 30	IC	Lab, Lec, AV, EPP	70	12/ 1/58	12/12/58	C; 10 days	90
480-A. Introduction to Radiological Health	New York University Post-Graduate Medical School 550 First Ave., New York 16	G and non-Physicians Lim 35	IC	Lab, Lec, AV	70	1/ 5/59	1/16/59	C; 10 days	90
480-B. Radiological Health Laboratory	New York University Post-Graduate Medical School 550 First Ave., New York 16	G and non-Physicians Lim 10	IC	Lab, Lec, AV	70	1/19/59	1/30/59	C; 10 days	90
482-B. Industrial Hygiene Laboratory	New York University Post-Graduate Medical School 550 First Ave., New York 16	G and non-Physicians Lim 10	II	Lab, Lec, AV		2/59	15 wk. later		90
1810-A. Industrial Toxicology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	II	Lab, Lec, AV		2/59	15 wk. later		100
1812-A. Radiation Hygiene Measurements	New York University Post-Graduate Medical School 550 First Ave., New York 16	G	IC	Lab, Lec, AV	140	5/ 4/59	5/29/59	C; 20 days	180
School Health	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	G	IC	PD, Lec, O, AV	5	9/11/58	9/11/58	C; 1 day	10
Postgraduate Course in Aviation Medicine	Ohio State University Health Center, Columbus, Ohio	G Lim 40	IC	PD, LC, Clin C, Sem, Lec, Pan, O, AV	36	9/ 8/58	9/12/58	C; 5 days	75
Treatment of Athletic Injuries	University of Oklahoma Medical Center 801 N.E. 13th St., Oklahoma City	G	IC	PD, LC, Clin C, Sem, Lec, Pan, O, AV	12	4/10/59	4/11/59	C; 2 days	10

Key will be found on page 1934.

OPHTHALMOLOGY

(See also Ophthalmology and Otolaryngology)

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Postgraduate Conference in Ophthalmology	Stanford University School of Medicine 2398 Sacramento St., San Francisco	S Lim 30	IC	Lab, PD, Sem, Lec, Pan, O	29	Spring 1959		C; 5 days	100
Postgraduate Course on External Eye Diseases	University of California Medical Center Second and Parnassus Ave., San Francisco	S Lim 100	IC	PD, Clin C, Lec, Pan, AV	30	12/ 3/58	12/ 6/58	C; 4 days	65
Clinical Ophthalmology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 4	PT	Lab, PD, LC, BR, Clin C, Surg, O	50	Arranged By appointment	2 wk. later	10 days	50
Extraocular Muscles II—Diagnosis and Treatment of Strabismus	Northwestern University Medical School 303 E. Chicago Ave., Chicago 11	S Lim 5	II	PD, LC, BR, Sem, Lec	200	Arranged		I; 100 sessions 2 hr., arranged	150
Extraocular Muscles I—Diagnosis and Treatment of Strabismus	Northwestern University Medical School 303 E. Chicago Ave., Chicago 11	S Lim 5	IC	PD, LC, Sem, Lec	24	9/ 8/58	9/19/58	C; 10 days	100
Clinical Traineeship in Ophthalmology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 1	PT	Lab, PD, LC, BR, Clin C, Sem, Lec, O, AV, EPP		Arranged	1 mo. later	30 days	50 in state; 100 out of state
Glaucoma	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	S Lim 10	IC	PD, BR, Clin C, Lec, Pan, O, AV	14	12/12/58	12/13/58	C; 2 days	50
Ophthalmology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	S	IC	PD, Clin C, Lec, Pan, O, AV	17	4/ 8/59	4/10/59	C; 3 days	40
Ophthalmology—Infectious Diseases of the Eye	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	S Lim 50	IC	Lab, Clin C, Sem, Lec	44	1/12/59	1/17/59	C; 5½ days	50
Lancaster Courses in Ophthalmology, Basic Science	Parker Heath, M.D., Director Ophthalmological Study Council Sullivan Harbor, Me.; course at Colby College, Waterville, Me.	B Lim 80	IC	Lab, Clin C, Sem, Lec, Pan, O, EPP	445	6/21/59	9/ 6/59	C; 11 wk.	325
Ophthalmology	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course also at Massachusetts Eye and Ear Infirmary, Boston	S Lim 30	IC	Lab, PD, Clin C, Lec	35-40 hr. wk.	9/22/58	3/11/59	C; 25 wk.	600
Ophthalmology	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	S Lim 150	IC	Clin C, Lec, Pan, O	18	4/20/59	4/22/59	C; 3 days	50
Home Study Course in Ophthalmology	American Academy of Ophthalmology and Otolaryngology 15 Second St., S.W., Rochester, Minn.	S	HS(R)	Assigned reading		9/ 1/58	6/30/59	9 mo.	20
Seminar on Glaucoma	Brooklyn Eye and Ear Hospital 29 Green Ave., Brooklyn, N. Y.	S Lim 6	IC	PD, LC, Clin C, Lec, O, EPP	18	11/17/58 5/59	11/19/58	C; 3 days	50
External Eye Diseases and Ophthalmoscopy	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Jewish Chronic Disease Hospital, Brooklyn, N. Y.	G Lim 10	II	PD, Lec, AV	16	4/59	5/59	I; 8 sessions 2 hr. weekly, Wednesdays	30
Ophthalmology PM 31-Glaucoma	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S Lim 10	II	PD, Lec, O, AV, EPP	9	10/ 7/58	10/23/58	I; 6 sessions 1½ hr. twice weekly, Tuesdays, Thursdays	50
Ophthalmology PM 62-Glaucoma	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	S	II	PD, Sem, O, AV	16	10/20/58	12/ 8/58	I; 8 sessions 2 hr. weekly, Mondays	30
Ophthalmology PM 32-Ophthalmoscopy	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G Lim 12	II	Lab, PD, Clin C, EPP	12	11/ 6/58	12/ 4/58	I; 8 sessions 1½ hr. twice weekly, Tuesdays, Thursdays	75
Ophthalmology PM 60-Elementary Ophthalmoscopy	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G	II	PD, Lec, O, AV, EPP	18	1/ 7/59	3/ 5/59	I; 9 sessions 2 hr. weekly, Wednesdays	30
Ophthalmology PM 33-The Use of Schepens' Ophthalmoscope	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S Lim 8	II	Lab, PD, Sem, EPP	12	3/10/59	3/26/59	I; 6 sessions 2 hr. twice weekly, Tuesdays, Thursdays	50

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Ophthalmology PM 30-Histopathology of the Eye	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S Lim 10	II	PD, Lec, O, AV, EPP	16	4/ 1/59	4/24/59	I; 8 sessions 2 hr. twice weekly, Wednesdays, Fridays	100
Plastic Eye Surgery	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 10	II	PD, LC, Surg, Lec, O, AV	42	11/ 3/58	11/20/58	I; 6 sessions 7 hr. Mondays, Thursdays, 3 wk.	200
Anomalies of Extraocular Muscles Including Ptosis	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 10	II	PD, LC, Surg, Lec, O, AV	20	11/ 4/58	11/ 8/58	I; 4 sessions 3 hr. on Tuesday, Wednesday, all day Friday, Saturday	100
Keratectomies and Keratoplasties	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 30	IC	Surg, Lec, O, AV, TV, EPP	14	11/ 4/58	11/ 5/58	C; 2 days	75
Gonioscopy and Tonography	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 15	IC	PD, Lec, O, AV, EPP	3	11/10/58 12/ 1/58	11/10/58	C; 1 day	15
Cataracts	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 12	IC	Lab, PD, Surg, Lec, O, AV, EPP	14	11/11/58	11/12/58	C; 2 days	75
Retinal Detachment	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 30	IC	PD, Surg, Lec, O, AV, EPP	14	11/14/58	11/15/58	C; 2 days	75
Pathology	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 20	IC	Lec, O, AV	21	11/18/58	11/21/58	C; 3 days	100
Ocular Trauma	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S	IC	PD, Lec, Pan, O, AV	22	11/24/58	11/26/58	C; 3 days	100
Biomicroscopy, Near Ultra-Violet Biomicroscopy, Gonioscopy and Tonography	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 20	IC	PD, Lec, O, AV, EPP	14	11/28/58	11/29/58	C; 2 days	75
Biomicroscopy	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 8	II	PD, Lec, O, AV, EPP	16	12/ 1/58	12/24/58	I; 8 sessions 2 hr. twice weekly, Mondays, Wednesdays	80
Complications of Ophthalmic Surgery	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 25	II	Lab, Lec	10	12/ 1/58	12/31/58	I; 10 sessions 1 hr. twice weekly, Mondays, Wednesdays	50
Near Ultra-Violet Biomicroscopy	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 12	II	PD, Lec, O, EPP	3	12/ 1/58	12/ 5/58	I; 3 sessions one hr. Monday, Wednesday, Friday	15
Ocular Photography	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 12	II	Lec, O, AV, EPP	8	12/ 1/58	12/ 5/58	I; 3 sessions 2 hr. thrice in one wk., Monday, Thursday, Friday	40
Clinical Bacteriology	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 6 for lab. sessions	IC	Lab, Lec, O, AV, EPP	5	12/ 2/58	12/ 3/58	C; 2 days	25
Glaucoma	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 8	II	PD, Surg, Lec, O, AV	15	12/ 2/58	12/18/58	I; 6 sessions 2½ hr. twice weekly, Tuesdays, Thursdays	75
Ophthalmoscopy	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 6	II	PD, Lec, O, AV, EPP	12	12/ 2/58	12/18/58	I; 6 sessions 2 hr. twice weekly, Tuesdays, Thursdays	60
Refraction	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 25	II	PD, Lec, O, AV	12	12/ 2/58	12/18/58	I; 6 sessions 2 hr. twice weekly, Tuesdays, Thursdays	60

Key will be found on page 1954.

OPHTHALMOLOGY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Ocular Allergy	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S	II	PD, Lec, O, AV	4	12/ 5/58	12/12/58	I; 2 sessions 2 hr. weekly, Fridays	20
Ocular Radiology	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 9	IC	PD, Lec, O, AV	6	12/ 8/58	12/13/58	C; 1 hr. daily for 6 days	30
Pleoptics and Macular Function Testing	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 10	II	PD, Lec, O, AV, EPP	3	12/ 8/58	12/12/58	I; 3 sessions 1 hr. thrice one wk., Monday, Wednesday, Friday	15
Psychosomatic Factors in Ophthalmology	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S	II	Lec, O, AV	4	12/ 8/58	12/10/58	I; 2 hr. twice one wk., Monday, Wednesday	20
Ocular Neuro-Ophthalmology	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S	II	PD, Lec, O, AV	10	12/ 9/58	12/18/58	I; 5 sessions 2 hr. twice weekly, Tuesdays, Thursdays	50
Perimetry	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S	II	Lec, O, AV	3	12/10/58	12/17/58	I; 2 sessions 1½ hr. Wednesdays two wk.	15
Aniseikonia	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S	IC	Lec, O, AV	2	12/15/58	12/15/58	C; 1 day	10
Lacrimal Sac Surgery	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S	II	PD, Surg, Lec, O, AV	8	12/15/58	12/23/58	I; 4 sessions 2 hr Mondays, Tuesdays, two wk.	40
Medical Ophthalmoscopy	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 10	II	PD, Lec, O, EPP	6	12/15/58	12/19/58	I; 2 hr. Mondays, Wednesdays, Fridays, one wk.	30
Electrophysiology of the Eye	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 10	IC	Lab, PD, Lec, O, AV, EPP	6	12/29/58	12/31/58	C; 3 days	30
Ocular Biochemistry	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 8	IC	Lab, Lec, O, AV	7½	1/ 5/59	1/ 9/59	C; 5 days	35
Ocular Microbiology	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 8	IC	Lab, Lec, O, AV, EPP	6	1/ 5/59	1/ 8/59	C; 4 days	30
Radioisotopes in Ophthalmology	Institute of Ophthalmology of the Americas New York Eye and Ear Infirmary 218 Second Ave., New York	S Lim 12	IC	Lab, PD, Lec, O, AV, EPP	15	1/ 5/59	1/ 9/59	C; 5 days	75
Ophthalmology with Operative Ophthalmology (Cadaver)	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 12	IC	Lab, PD, LC, BR, Clin C, Lec, O, AV	360	10/ 1/58 4/ 1/59	12/31/58	C; 72 days	300
Refraction	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 12	IC	PD, LC, Clin C, Lec	72	10/ 1/58 4/ 1/59	10/31/58	C; 24 days	100
Ophthalmic Plastic Surgery	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 15	IC	PD, Surg, Lec, Pan, O, AV	15	11/17/58 3/16/59	11/21/58	C; 5 days	85
572-A. Surgery of the Cornea	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 40	IC	Lab, PD, LC, Surg, Lec, O, AV, TV, EPP	35	12/ 1/58	12/ 5/58	C; 5 days	225
573-A. Neuro-Ophthalmology	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim	IC	PD, Lec, O, AV	15	1/19/59	1/23/59	C; 5 days	55
574-A. Annual Review of Ophthalmological Advances	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 20	IC	PD, Lec, Pan, O, AV	15	2/12/59	2/14/59	C; 2½ days	100
Motor Anomalies of the Eye (Part I)	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 25	IC	PD, Clin C, Lec, Pan, O, AV	42	3/ 2/59	3/ 7/59	C; 6 days	100
576-A. Motor Anomalies of the Eye (Part II)	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 26	IC	PD, LC, Clin C, Lec, Pan, O, AV, EPP	35	3/ 9/59	3/13/59	C; 5 days	85
577-A. Ocular Expressions of Systemic Disease	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim	IC	PD, Lec, Pan, O, AV	15	3/16/59	3/20/59	C; 5 days	55

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578-A. Surgery of the Eye	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 11	IC	Lab, PD, Surg, Lec, Pan, O, AV	42	3/30/59	4/ 4/59	C; 6 days	125
5710-A. Histopathology	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim	IC	Lab, Lec, O, AV	15	5/ 4/59	5/ 8/59	C; 5 days	100
579-A. Ophthalmoscopy	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim	IC	PD, Lec, O, AV	15	5/ 4/59	5/ 8/59	C; 5 days	55
Ophthalmology	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.; course at Hotel Syracuse, Syracuse	S Lim 60	IC	Lec, Pan, AV	14	12/ 5/58	12/ 6/58	C; 2 days	25
Postgraduate Course in Ophthalmology	Ohio State University College of Medicine 11th and Neil Aves., Columbus 10, Ohio	S	IC	Lec, AV	16	3/ 2/59	3/ 3/59	C; 2 days	20
Postgraduate Convention-Ophthalmology	Secretary-Treasurer, Oregon Academy of Ophthalmology and Otolaryngology 1216 S. W. Yamhill St., Portland 5, Ore.; course at University of Oregon School of Medicine, Portland, Ore.	S	IC	Lec, Pan, O, AV	16	6/29/59	6/30/59	C; 2 days	60, or 90 if combined with otol. course
Slit-Lamp Microscopy, Gonioscopy, Eye Surgery	Dr. H. E. Thorpe Committee on Ophthalmic Postgraduate Education, Montefiore Hospital, 3459 5th Ave., Pittsburgh 13;	S Lim 35	IC	Lab, PD, Sem, Lec, AV, EPP	28	5/ 4/59	5/ 7/59	C; 4 days	85
Biomicroscopy of the Posterior Vitreous and Fundus	University of Texas Postgraduate School of Medicine 7400 Outer Belt Drive, Houston 25, Tex.; course at The University of Texas M. D. Anderson Hospital Houston, Tex.	S and residents Lim 8	II	Lab, PD, Lec, AV	3	12/ 4/58	12/18/58	I; 3 sessions 1 hr. weekly, Thursdays	Nil
OPHTHALMOLOGY AND OTOLARYNGOLOGY									
Otolaryngology and Ophthalmology Including Refraction and EENT (Cadaver)	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 10	IC	Lab, PD, LC, BR, Clin C, Lec, O, AV	480	10/ 1/58 4/ 1/59	12/31/58	C; 72 days	600
Ophthalmology-Otolaryngology	University of Oklahoma Medical Center 801 N. E. 13th St., Oklahoma City	S	IC	PD, Sem, Lec, Pan, O, AV	8	3/12/59	3/13/59	C; 2 days	10
Postgraduate Convention-Ophthalmology and Otolaryngology	Secretary-Treasurer, Oregon Academy of Ophthalmology and Otolaryngology 1216 S. W. Yamhill St., Portland 5, Ore.; course at University of Oregon School of Medicine, Portland, Ore.	S	IC	Lec, Pan, O, AV	16	6/26/59	6/30/59	C; 4 days	90
Thirty-Second Annual Spring Congress in Ophthalmology and Otolaryngology	Gill Memorial Eye, Ear and Throat Hospital 711 S. Jefferson St., Roanoke, Va.	S Lim 200	IC	Lab, PD, LC, Clin C, Sem, Surg, Lec, O, AV, TV	40	4/ 6/59	4/11/59	C; 5½ days	80
ORTHOPEDIC SURGERY (See also Anatomy, Fractures, General Practice, Surgery)									
872 Orthopedics in General Practice	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33; course at Hotel Statler, Los Angeles	G	IC	PD, LC, Lec, Pan, O	24	Spring/59		C; 3 days	75
Orthopedic Basic Science	Northwestern University Medical School 303 E. Chicago Ave., Chicago 11	S Lim 16	IC	Lab, PD, LC, BR, Clin C, Sem, Lec	750	7/ 1/59	12/31/59	C; 120 days	600
Orthopedics	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	Unknown	IC	PD, Lec, O, AV	7	2/25/59	2/25/59	C; 1 day	10
Orthopedic Surgery 1	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Children's Hospital, Boston	S Lim 2	IC	Lab, PD, LC, BR, Sem, Surg, Lec	Variable	Arranged		Arranged	800 for 12 mo.
Orthopedic Surgery 2	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Massachusetts General Hospital, Boston	S Lim 2	IC	Lab, PD, LC, BR, Sem, Surg, Lec	Variable	Arranged		Arranged	800 for 12 mo.
Orthopedic Surgery-Herniated Disk, Skeletal Tuberculosis, Fractures of Spine	Seton Hall College of Medicine and Dentistry, Department of Postgraduate Medical Education 31 Clinton St., Newark, N.J.; course at Hospital for Crippled Children, Newark, N.J. New Jersey Orthopaedic Hospital, Orange, N.J.	S Lim 35	II	PD, Lec, O, AV	15	10/14/58	12/16/58	I; 10 sessions 1½ hr. weekly Tuesdays	100

Key will be found on page 1954.

ORTHOPEDIC SURGERY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Orthopedic Surgery PM 81—Foot Disability	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Hospital for Joint Diseases, New York 35	G	II	PD, Lec, O, AV	21	10/ 2/58	10/ 4/58	I; 3 sessions 7 hr. thrice weekly Thursday, Friday, Saturday	100
Orthopedic Surgery PM 80	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Hospital for Joint Diseases, New York 35	G	IC	PD, Lec, O, AV	36	10/20/58	10/25/58	C; 6 days	100
Orthopedic Surgery PM 1—Musculo-Skeletal Disease and Injury	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Columbia-Presbyterian Medical Center, New York 32	S	IC	Lec, O	35	1/ 5/59	1/ 9/59	C; 5 days	100
584-A. Orthopedics for the General Practitioner	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	II	PD, BR, O, AV, EPP	16	10/ 7/58	12/ 2/58	I; 8 sessions 2 hr. weekly, Tuesdays	45
586-A. Orthopedic Aspects of the Treatment of Rheumatic Disorders	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	II	PD, LC, BR, Clin C, Lec, O, AV	20	10/ 8/58	12/10/58	I; 10 sessions 2 hr. weekly, Wednesdays	50
582-A. Orthopedics in General Practice	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	IC	PD, BR, O, AV, EPP	21	2/18/59	2/20/59	C; 3 days	55
585-A. Orthopedic Aspects of the Treatment of Rheumatic Disorders	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	II	PD, LC, BR, Clin C, Lec, O, AV	21	3/17/59	3/31/59	I; 3 sessions 7 hr. weekly, Tuesdays	50
Pathology and Roentgenology of the Skeletal System	Assistant to the Dean University of Wisconsin Medical School 418 N. Randall Ave., Madison 6, Wis.	S Lim 100	IC	PD, Lec, Pan, O, AV	21	5/21/59	5/23/59	C; 3 days	35

OTOLARYNGOLOGY
(See also Anatomy, Endoscopy, Pathology)

Ear, Nose and Throat	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	PD, Sem, Lec, Pan, O, AV	12	3/ 7/59	3/ 8/59	C; 1½ days	50
Clinical Otolaryngology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 4	PT	Lab, PD, LC, BR, Clin C, Surg, O	50	Arranged by appointment	2 wk. later	10 days	50
Fellowship Fenestration Surgery	Northwestern University Medical School 303 E. Chicago Ave., Chicago 11	S Lim 2	IC	Lab, PD, LC, BR, Clin C, Sem, Surg, Lec	960	Arranged		C; 80 days	500
Endural Otologic Surgery and Audiology	Northwestern University Medical School 303 E. Chicago Ave., Chicago 11	S Lim 10	IC	Lab, PD, LC, BR, Clin C, Sem, Lec	200	3/59		C; 5 wk.	800
Annual Otolaryngologic Assembly—Current trends in Otolaryngology	University of Illinois College of Medicine 1853 W. Polk St., Chicago 12	S Lim 40	IC	Lab, PD, Clin C, Sem, Lec, Pan, O, AV	61	9/29/58	10/ 5/58	C; 7 days	125
Basic Science of Otolaryngology	University of Illinois College of Medicine 1853 W. Polk St., Chicago 12	Unknown Lim 20	PT	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV	1584	10/ 1/58	6/30/59	190 days	750
Fundamentals of Otolaryngology for Otolaryngologists	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	S	II	PD, LC, Clin C, Lec, O, AV	70	10/22/58	6/24/59	I; 35 sessions 2 hr. weekly, Wednesdays	Nil
Anatomical and Clinical Aspects of Otolaryngology	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	S Lim 20	IC	Lab, PD, LC, Lec, Pan, O, AV	100	4/ 6/59	4/18/59	C; 13 days	250
Clinical Traineeship in Otorhinolaryngology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 1	PT	Lab, PD, LC, BR, Clin C, Sem, Lec, O, AV, EPP		Arranged	1 mo. later	30 days	50 in state; 100 out of state
Otolaryngology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	S	IC	PD, Clin C, Lec, Pan, O, AV	17	4/ 6/59	4/ 8/59	C; 3 days	40
Otolaryngology	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	S Lim 60	IC	PD, Lec, O, AV	18	4/16/59	4/18/59	C; 3 days	50
Otolaryngology for General Physicians	Continuation Medical Education 3342 Mayo Memorial University of Minnesota, Minneapolis 14	G	IC	Lec, O, AV	15	1/ 5/59	1/ 7/59	C; 3 days	40
Otolaryngology for Specialists	Continuation Medical Education 3342 Mayo Memorial University of Minnesota, Minneapolis 14	S	IC	Lec, O, AV	15	5/27/59	5/29/59	C; 3 days	40

Home Study Course in Otolaryngology	American Academy of Ophthalmology and Otolaryngology 15 Second St., S. W., Rochester, Minn.	S	HS (R)	Assigned reading		9/ 1/58	6/30/59	9 mo.	20
Medical Otolaryngology and Related Allergy and Immunology	Hansel Foundation 634 N. Grand Ave., St. Louis	S Lim 60	IC	Lab, Lec, Pan, O, AV, EPP	40	5/25/59	5/29/59	C; 5 days	150
Otorhinolaryngology PM 30—Transmeatal (endaural) Surgery	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital New York 29	S Lim 8	IC	Lab, Surg, Lec, O, AV, EPP	50	9/ 8/58 4/ 6/59	9/19/58	C; 10 days	300
Otorhinolaryngology PM 31—Mobilization of Stapes	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S Lim 4	IC	Lab, PD, Surg	120	11/ 3/58 4/ 6/59	11/21/58	C; 15 days	500
Otorhinolaryngology PM 32—Voice Rehabilitation and Audiology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	IC	PD, LC, Sem	42	2/ 9/59 2/12/59	2/11/59	C; 3 days	75
Otolaryngology PM 2—Histopathology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Columbia-Presbyterian Medical Center, New York 32	S	II	Lab	32	4/ 7/59	5/28/59	I; 16 sessions 2 hr. twice weekly, Tuesdays, Thursdays	100
508-A. Endaural Surgery	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 8	IC	Lab, PD, Sem, Lec, Pan, O, AV, EPP	70	11/ 3/58 1/26/59	11/14/58	C; 10 days	250
5010-A. Laryngology and Surgery of the Larnyx and Neck	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 10	IC	Lab, PD, LC, Sem, Surg, Lec, Pan, O, AV, EPP	70	1/ 5/59	1/16/59	C; 10 days	250
5012-A. Seminar in Recent Advances in Otolaryngology	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 15	IC	PD, LC, Clin C, Sem, Lec, Pan, O, AV	35	2/16/59	2/20/59	C; 5 days	75
507-A. Audiology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 15	IC	PD, LC, Clin C, Sem, Lec, Pan, O, AV, EPP	35	3/ 2/59	3/ 6/59	C; 5 days	100
508-A. Neuro-Otology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 10	IC	PD, LC, Clin C, Sem, Lec, Pan, O, AV	21	3/ 9/59	3/11/59	C; 3 days	50
Ninth Annual Teaching Day in Otolaryngology	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	S	IC	Sem, Lec, Pan, AV	8	Spring/59		C; 1 day	Unknown
Postgraduate Convention-Otolaryngology	Secretary-Treasurer, Oregon Academy of Ophthalmology and Otolaryngology 1216 S.W. Yamhill St., Portland 5, Ore.; course at University of Oregon School of Medicine, Portland, Ore.	S	IC	Lec, Pan, O, AV	16	6/26/59	6/27/59	C; 2 days	60 or 90 if combined with Oph. course
Anatomy, Diagnosis and Treatment of Laryngeal Disease and Laryngeal Surgery	Chevalier Jackson Clinic, Temple University Medical Center 3401 N. Broad St., Philadelphia 40	B Lim 6	IC	Lab, PD, LC, Clin C, Sem, Surg, Pan, O, AV, EPP	80	12/ 1/58	12/12/58	C; 11 days	250
Myringoplasty	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.	S Lim 12	IC	PD, BR, Surg, Lec, AV	21	3/26/59	3/28/59	C; 3 days	50
Rehabilitation of the Laryngectomee	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at The University of Texas M.D. Anderson Hospital, Houston, Tex.	G also non-physicians Lim 30	IC	PD, Lec, O, EPP	50	6/59		C; 10 days	Nil
		PATHOLOGY (See also Clinical Pathology, Malignant Disease)							
Surgical Pathology	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33	G Lim 15	II	Lec	178	9/ 9/58	6/ 4/59	I; 71 sessions 2½ hr. twice weekly, Tuesdays, Thursdays	175
Neuropathology	Program Director, Connecticut Postgraduate Seminar in Psychiatry and Neurology Connecticut State Hospital, Middletown, Conn.; course at Yale University School of Medicine, New Haven, Conn.	S Lim 40	II	Lec, O	16	9/24/58	11/12/58	I; 16 sessions 1 hr. weekly, Wednesdays	Nil

Key will be found on page 1954.

PATHOLOGY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Pathology 200—Brain Tumor Registry	Assistant Dean of Postgraduate Medical Education Yale University School of Medicine 333 Cedar St., New Haven, Conn.	S Neuro-surgery, Neurology and Neuro-pathology Lim	IC	Sem, O, AV	Arranged	Arranged		Arranged	Arranged
Application of Histochemistry to Pathology	Armed Forces Institute of Pathology 6825 - 16th St., N.W., Washington 12, D. C.	S Lim 30	IC	Lab, Sem, Lec		10/27/58	10/31/58	C; 5 days	Nil
Ophthalmic Pathology	Armed Forces Institute of Pathology 6825 - 16th St., N.W., Washington 12, D. C.	S Lim 50	IC	Lab, Sem, Lec, AV	45	3/ 9/59	3/13/59	C; 5 days	Nil
Pathology of the Oral Regions	Armed Forces Institute of Pathology 6825 - 16th St., N.W., Washington 12, D. C.	B and dentists Lim 100	IC	Sem, Lec, Pan	36	3/23/59	3/27/59	C; 5 days	Nil
Cardiovascular Pathology Seminar	Armed Forces Institute of Pathology 6825 - 16th St., N.W., Washington 12, D. C.	B Lim 125	IC	Sem	32	4/ 6/59	4/10/59	C; 5 days	Nil
Gynecological Pathology Review	Baptist Memorial Hospital 800 Miami Road, Jacksonville, Fla.	S Lim 20	II	Sem, Lec, O, AV	9	2/ 5/59	3/26/59	I; 6 sessions 1½ hr. weekly, Wednesdays	Nil
Surgical Pathology Review	Baptist Memorial Hospital 800 Miami Road, Jacksonville, Fla.	S Lim 20	II	Sem, Lec, O, AV	9	4/ 2/59	5/ 7/59	I; 6 sessions 1½ hr. weekly, Wednesdays	Nil
Surgical Pathology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 9	IC	Lab, Clin C, Sem, Lec, O, EPP	48	Arranged By appointment	2 wk. later	C; 12 days	150
Surgical Pathology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 9	IC	Lab, Clin C, Sem, Lec, O, EPP	96	Arranged appointment	4 wk. later	C; 24 days	250
Orthopedic Pathology—Bone Disease	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	G	II	Lab, Lec, O, AV, EPP	22	10/ 6/58	12/15/58	I; 11 sessions 2 hrs. weekly, Mondays	50
Clinical Traineeship in Pathology	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 1	PT	Lab, PD, Clin C, Sem, Lec, O, AV EPP	Varies	Arranged	at least 1 mo. later	Arranged	50 per mo. in state; 100 per mo. out of state
Neuropathology	University of Maryland School of Medicine Lombard and Greene Sts., Baltimore	S Lim 3	IC	Lab, Sem		Arranged	six mo. later	C; six mo. full time	210
Pathology of Tuberculosis	Wayne State University College of Medicine 1402 Rivard St., Detroit; course at Herman Kiefer Hospital, Detroit	S Lim 15	II	Lab, PD, Sem, Lec, AV, EPP	36	12/10/58	3/11/59	I; 12 sessions 3 hr. weekly, Wednesdays	50
Gynecological and Obstetrical Pathology	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Kings County Hospital, Brooklyn, N. Y.	S Lim 10	II	Lec, AV	30	3/59	5/59	I; 10 sessions 3 hr. weekly, Fridays	100
Pathology GM 1-Surgical Pathology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Columbia-Presbyterian Medical Center, New York 32	G	PT	Lab, PD, Clin C, EPP		1st day ea. mo.		6 or 12 mo.	300 for 6 mo. 600 for 12 mo.
Pathology PM 30-General and Special Pathology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	II	Lab	30	9/30/58	1/10/59	I; 15 sessions 2 hr. weekly, Saturdays	100
Pathology PM 31-Surgical Pathology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Columbia-Presbyterian Medical Center, New York 32	S	II	Lab	30	1/10/59	4/18/59	I; 15 sessions 2 hr. weekly, Saturdays	100
Exfoliative Cytology	Cornell University Medical College 1300 York Ave., New York 21	S also Pathology technologists Lim 32	IC	Lab, Lec, O, AV, EPP	396	3/ 9/59	5/29/59	C; 66 days, shorter by arrangement	300
Surgical Pathology	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 8	IC	Lab, PD, LC, Clin C, Lec	360	10/ 1/58 4/ 1/59	12/31/58	C; 72 days	300

Gynecological Pathology—Correlation of Pathologic Findings with Clinical Diagnosis	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at University of Texas M.D. Anderson Hospital, Houston, Tex.	B Lim 4	II	Lab, PD, BR, Clin C, Lec	8	9/ 2/58 10/ 7/58 11/ 4/58 scheduled also for 1959	9/25/58	I; 8 sessions 1 hr. twice weekly, Tuesdays, Thursdays	10
PEDIATRICS (See also Dermatology, Cardiovascular Disease, Endocrinology, Ephebology, Neurology, Occupational Medicine, Psychiatry)									
Pediatrics—Developmental Diagnosis	Department of Continuing Education in Medicine and Health Sciences University of California at Los Angeles Medical Center, Los Angeles 24	G	IC	PD, Sem, Lec, Pan, O, AV	12	12/58		C; 2 days	Unknown
867—Short Term Clinical Course in Pediatrics	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33; course at Children's Hospital, Los Angeles	G	PT	PD, LC, BR, Sem, Lec, EPP		Arranged	Arranged	Arranged	150 for 2 wk.; 200 for 4 wk.; 250 for 6 wk.;
Speech Problems	University of California Medical Center Second and Parnassus Ave., San Francisco; course at Children's Hospital, San Francisco	G Lim 75	IC	PD, Lec, Pan, O, AV	7	11/15/58	11/15/58	C; 1 day	12.50
Clinical and Research Advances in Child Guidance Problems	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20; course at Stanley Hotel, Estes Park, Colo.	S Lim 350	IC	Sem, Lec, Pan, O, AV	36	9/ 4/58	9/ 9/58	C; 4½ days	55 or 35 for each part
Pediatric Postgraduate Day	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B Lim 100	II	PD, LC, Sem, Lec, Pan, O, AV	36	10/ 3/58	6/ 5/59	I; 9 sessions 4 hr. monthly, 1st. Friday each mo.	Nil
Clinical Pediatrics	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 4	PT	Lab, PD, LC, BR, Clin C, Sem, O, EPP	60	Arranged by appointment	2 wk. later	12 days	60
Clinical Pediatrics	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 4	PT	Lab, PD, LC, BR, Clin C, Sem, O, EPP	120	Arranged by appointment	4 wk. later	24 days	100
Course V—Pediatrics	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 25	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, O	70	4/20/59	5/ 1/59	C; 11 days	150
Pediatrics for General Physicians	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	G	IC	Lec, Pan, O, AV	7	12/17/58	12/17/58	C; 1 day	10
Pediatric Course	State University of Iowa College of Medicine University Hospitals, Iowa City	G	IC	PD, BR, Lec, Pan, O, AV	12	9/17/58	9/18/58	C; 2 days	20
Clinical Traineeship in Pediatrics	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 2	PT	Lab, PD, LC, BR, Clin C, Sem, Lec, O, EPP	Varies	Arranged	1 mo. later	Arranged	50 in state; 100 out of state
Pediatrics	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	IC	PD, Clin C, Lec, Pan, O, AV	21	3/ 9/59	3/11/59	C; 3 days	40
Annual Pediatric Postgraduate Course	Department of Pediatrics, Univ. of Louisville Medical School 323 E. Chestnut St., Louisville 2; course at The Children's Hospital, Louisville 2	G Lim 50	II	PD, Clin C, Sem, Lec, Pan, O, AV	22	4/14/59	6/ 2/59	I; 8 sessions 3 hr. weekly, Tuesdays	30
Pediatric Dermatology	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	S Lim 40	IC	PD, Sem, Lec, Pan, O	44	2/16/59	2/21/59	C; 5½ days	50
Pediatric Metabolism and Endocrinology	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Massachusetts General Hospital, Boston 14	G	IC	PD, Lec	28	Probably autumn 1958		C; 4 days	70
Pediatrics 2	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Children's Hospital, Boston 15	G Lim 8	IC	Lab, PD, LC, BR, Clin C, Lec, Pan, O	420	10/ 1/58 2/ 3/59	1/23/59	C; 14 wk.	500
Pediatrics 3	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Massachusetts General Hospital, Boston	G Lim 50	IC	PD, Clin C, Lec	70	Probably 6/59		C; 11 days	150
Pediatrics	New England Medical Center 171 Harrison Ave., Boston	G Lim 50	IC	PD, LC, Clin C, Sem, Pan, O	15	3/19/59	3/21/59	C; 3 days	20

Key will be found on page 1954.

PEDIATRICS—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Pediatrics	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G Lim 60	IC	PD, Clin C, Lec, Pan, O, AV	18	1/26/59	1/28/59	C; 3 days	$0
Institute on Maternal and Child Health and Crippled Children	University of Minnesota School of Public Health and University of Michigan School of Public Health; course at Minneapolis	Child Health M.D.'s, Nurses, Social Workers Lim 72	IC	Sem, Lec, Pan, O	40	12/ 1/58	12/ 5/58	C; 5 days	Nil
Pediatrics for Pediatricians	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	S	IC	Lec, Pan, O, AV	15	9/23/58	9/25/58	C; 3 days	40
Pediatrics for General Physicians	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	IC	Lec, Pan, O, AV	15	3/ 2/59	3/ 4/59	C; 3 days	40
In Hospital Review In Pediatrics	University of Nebraska College of Medicine 42nd and Dewey, Omaha 5	G Lim 5	PT	PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV, EPP	40	Unknown		5½ days	50
Pediatrics	Office of Postgraduate Affairs University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	IC	PD, BR, Clin C, Sem, Lec, Pan, O, AV	12	4/13/59	4/14/59	C; 2 days	30
Emotional and Psychiatric Aspects of Pediatrics	Seton Hall College of Medicine and Dentistry, Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at St. Michael's Hospital Newark, N. J.	B Lim 45	II	Lec, O, AV	15	1/14/59	3/18/59	I; 10 sessions 1½ hr. weekly, Wednesdays	25
Pediatric Teaching Day	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	IC	PD, LC, Clin C, Sem, O, AV	6	12/11/58	12/11/58	C; 1 day	10
Pediatric Refresher Course	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G Lim 25	II	PD, LC, BR, Clin C, Sem, O	24	3/26/59	4/30/59	I; 6 sessions 4 hr. weekly, Thursdays	30
Management of Infectious Diseases in Children	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N. Y.; course at Meadowbrook Hospital, East Meadow, N. Y.	G Lim 12	II	Bd, Lec	24	10/15/58	12/31/58	I; 12 sessions 2 hrs. weekly, Wednesdays	25
Lecture Course on the Common Problems in Office Pediatrics	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N. Y.; course at South Nassau Communities Hospital, Oceanside, N. Y.	G	II	Lec	8	12/ 3/58	1/15/59	I; 8 sessions 1 hr. weekly, Wednesdays	15
Tumors of Childhood	Memorial Center for Cancer and Allied Diseases 444 E. 68th St., New York	B	II	PD, BR, Sem, Lec, AV	16	9/58 11/58 1/59 4/59	11/58	I; 2 hr. weekly, Fridays	Nil
Pediatric Oncology—Tumors, Leukemia, Related Pediatric Diseases	Memorial Center for Cancer and Allied Diseases 444 E. 68th St., New York	B Lim 15	IC	Lab, PD, BR, Sem, AV	24	4/27/59	4/30/59	C; 3 days	35
Pediatrics	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 8	IC	Lab, PD, LC, BR, Clin C, Lec, O	144	10/ 1/58 4/59	10/31/58	C; 24 days	100
616-A. Seminar on General Pediatrics	New York University Post-Graduate Medical School 550 First Ave., New York 16	G	II	LC, Clin C, Sem, Lec, Pan, AV	36	10/ 1/58	5/27/59	I; 18 sessions 2 hr. weekly, Wednesdays	Unknown
612-A. Pediatric Endocrinology and Related Metabolism	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	IC	Lab, PD, Clin C, Lec, AV	24	11/10/58	11/13/58	C; 4 days	85
613-A. Pediatric Cardiology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 12	IC	PD, LC, BR, Clin C, Lec, O, AV	35	12/ 1/58	12/ 5/58	C; 5 days	55
614-A. Symposium on Tuberculosis and Other Pulmonary Diseases in Childhood	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	IC	PD, LC, Clin C, Sem, Lec, Pan, O, AV	35	4/13/59	4/17/59	C; 5 days	65
Pediatrics for the Family Physician	Rochester General Hospital 501 W. Main St., Rochester, N. Y.	G	II	PD, LC, Clin C, Sem, Lec, Pan, AV	8	1/22/59	1/29/59	I; 2 sessions 4 hr. weekly, Thursdays	10
Problems In Pediatric Practice	State University of New York Upstate Medical Center 766 Irving Ave., Syracuse, N. Y.	B Lim 20	IC	PD, Sem, O, AV	14	4/ 9/59	4/10/59	C; 2 days	10
The Letchworth Graduate Course in Mental Retardation	Program Director, Research Foundation for Mental Hygiene, Inc. Letchworth Village, Thiells, N. Y.	B Lim 10	IC	Lab, PD, LC, Clin C, Sem, Lec, O, AV	114	11/ 3/58 12/ 1/58 3/ 9/59 4/ 6/59	11/22/58	C; 16½ days	Nil

Home and Office Pediatrics	Dr. Gaston B. Hannah Southwestern Ohio Society of General Physicians Sharon and Willow Aves., Glendale, O.; course at University of Cincinnati College of Medicine, Cincinnati 29	G	IC	Sem, Pan	4	11/16/58	11/16/58	C; 1 day	10
Refresher Course for General Practitioners	The Children's Hospital of Philadelphia 1740 Bainbridge St., Philadelphia 46	G Lim 50	II	PD, LC, BR, Clin C, Sem, Lec, Pan, O	48	3/18/59	6/ 3/59	I; 12 sessions 4 hr. weekly, Wednesdays	120
Pediatric Advances	The Children's Hospital of Philadelphia 1740 Bainbridge St., Philadelphia 46	G Lim 100	IC	PD, LC, Clin C, Lec, Pan, O	35	5/25/59	5/29/59	C; 5 days	115
Recent Advances in Pediatrics for the General Practitioner	Hahnemann Medical College and Hospital 230 N. Broad St., Philadelphia	G Lim 25	II	PD, LC, BR, O, AV	24	9/58	Unknown	I; 12 sessions 2 hr. weekly, Wednesdays	50
Practical Pediatric Hematology	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G Lim 50	IC	PD, Clin C, Lec, Pan, O, AV	7	6/ 3/59	6 / 5/59	C; 3 days	75
Hemolytic Diseases of the Newborn	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G Lim 50	IC	PD, Clin C, Lec, Pan, AV	15	6/ 5/59	6/ 6/59	C; 2 days	50
A Postgraduate Review in Pediatrics	Vanderbilt University School of Medicine 21st Ave. South, Nashville, Tenn.	G	IC	PD, LC, Clin C, Lec, Pan, O	6	Fall/58	Fall/58	C; 1 day	15
Postgraduate Refresher Course in Pediatrics	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at Scott and White Memorial Hospitals Scott, Sherwood and Brindley Foundation, Temple, Tex.	G Lim 1	IC	PD, LC, BR, O, EPP	176	1st. Monday of each mo. January through December	Last Saturday of mo.	C; 24 days	25
The Brain Damaged Child	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at The University of Texas M.D. Anderson Hospital, Houston, Tex.	B Lim 270	IC	Lec, Pan, O, AV, TV	20	4/ 8/59	4/10/59	C; 3 days	5
Problems of the Newborn Period	Assistant to the Dean University of Wisconsin Medical School 418 N. Randall Ave., Madison 6, Wis.	G Lim 100	IC	PD, Lec, Pan, O, AV	18	2/19/59	2/21/59	C; 2½ days	30
	PERIPHERAL VASCULAR DISEASE (See also Surgery)								
Peripheral Vascular Disease	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	PD, Sem, Lec, Pan, O, AV		Spring/59		Unknown	Unknown
Peripheral Vascular Disease	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	IC	PD, BR, Sem, Lec, Pan, O, AV	14	2/18/59	2/19/59	C; 2 days	30
Peripheral Vascular Diseases	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Coney Island Hospital, Brooklyn, N. Y.	G Lim 20	II	Lec, AV	10	10/58	12/58	I; 10 sessions 1 hr. weekly, Mondays	20
Peripheral Vascular Diseases	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Jewish Hospital of Brooklyn, Brooklyn, N. Y.	G Lim 20	II	PD, Lec.	10	4/59	5/59	I; 10 sessions 1 hr. twice weekly, Mondays, Fridays	20
Medicine PM 65-Peripheral Vascular Diseases	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G Lim 15	II	PD, BR, Sem, Lec, O, AV, EPP	75	10/ 2/58	4/ 9/59	I; 25 sessions 3 hr. weekly, Thursdays	125
5415-A. Peripheral Vascular Diseases	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 30	IC	PD, Lec	35	11/17/58	11/21/58	C; 5 days	60
5425-A. Peripheral Vascular Diseases	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	II	PD, Lec	18	4/ 7/59	5/26/59	I; 8 sessions 2 hr. weekly, Tuesdays	50
Peripheral Vascular Disease	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G Lim 5	II	Lec, AV	10	9/58	12/58	I; Unknown	25
Peripheral Vascular Diseases	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	G Lim 80	IC	Clin, C, Lec, Pan, O, AV	20	6/25/59	6/27/59	C; 3 days	75

Key will be found on page 1954.

PHYSICAL MEDICINE AND REHABILITATION

(See also Occupational Medicine, Otolaryngology)

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Physical Medicine and Rehabilitation	University of California Medical Center Second and Parnassus Ave., San Francisco	G Lim 100	IC	PD, Lec, Pan, O, AV	14	Spring/58		C; 2 days	40
Physical Therapy and Occupational Therapy in the Care of Neuro-Muscular Disease	Georgia Warm Springs Foundation Warm Springs, Ga.	B Lim 35	IC	PD, LC, Lec, Pan, O	36	9/29/58 1/ 5/59 4/ 6/59	10/ 3/58	C; 5 days	Nil
Physical Therapy and Occupational Therapy in the Care of Neuro-Muscular Disease	Georgia Warm Springs Foundation Warm Springs, Ga.	G Lim 18	IC	PD, LC, Lec, Pan, O, AV, EPP	480	9/29/58 1/ 5/59 4/ 6/59	12/19/58	C; 90 days	Nil
Physical Therapy and Occupational Therapy in the Care of Neuro-Muscular Disease	Georgia Warm Springs Foundation Warm Springs, Ga.	G Lim 18	IC	PD, LC, Lec, Pan, O, AV, EPP	960	9/29/58 1/ 5/59 4/ 6/59	3/27/59	C; 180 days	Nil
Clinical Traineeship in Physical Medicine	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 1	PT	PD, LC, BR, Clin C, Sem, Lec, O, AV, EPP	Varies	Arranged	at least 1 mo. later	Arranged	50 per mo. in state; 100 per mo. out of state
Physical Medicine for Specialists	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	S	IC	PD, Lec, O, AV	15	11/20/58	11/22/58	C; 3 days	40
Physical Medicine and Rehabilitation	Office of Postgraduate Affairs University of Nebraska College of Medicine 42nd and Dewey, Omaha	G	IC	PD, BR, Clin C, Sem, Lec, Pan, O, AV	6	2/26/59	2/26/59	C; 1 day	10
Physical Medicine and Rehabilitation	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Coney Island Hospital, Brooklyn, N. Y.	G Lim 20	H	Lec, AV	10	10/58 4/59	12/58	I; 10 sessions 1 hr. weekly, Thursdays	20
Physical Medicine and Rehabilitation GM 1	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Columbia-Presbyterian Medical Center, New York 32	G	IC	PD, Clin C, AV		1st. day ea. mo.	6 or 12 mo. later		300 for 6 mo.; 600 for 12 mo.
Physical Medicine and Rehabilitation	New York Polyclinic Hospital 345 W. 50th St., New York 19	G	IC	PD, LC, BR, Lec, O	144	10/ 1/58 4/ 1/59	10/31/58	C; 24 days	100
621-A. Physical Medicine and Rehabilitation	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 30	IC	PD, Lec	70	1/ 5/59 5/ 4/59	1/16/59	C; 10 days	100
Physical Medicine and Rehabilitation Postgraduate Courses	Highland View Cuyahoga County Hospital 3801 Ireland Drive, Cleveland 22	S	PT	PD, LC, BR, Clin C, Sem, Surg, Lec, Pan, O		1/ 7/59 7/59	6/59	130 class days 6 mo.	Nil

PROCTOLOGY

Proctology	Department of Continuing Education in Medicine and Health Sciences, University of California Medical Center Los Angeles 24	G	IC	Lab, PD, Sem, Surg, Lec, Pan, O, AV	6	11/58	Same day	C; 1 day	40 entire day; 10 lecture session only
Proctology	University of California Medical Center Second and Parnassus Ave., San Francisco	G Lim 100	IC	Lec, Pan, AV	7	11/ 8/58	11/ 8/58	C; 1 day	20
Proctology for General Physicians	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G Lim 20	IC	Lec, O, AV	30	5/18/59	5/22/59	C; 5 days	65
Proctology	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Jewish Hospital of Brooklyn, Brooklyn, N. Y.	G Lim 20	H	PD, LC, Lec	18	10/58	12/58	I; 12 sessions 1½ hr. twice weekly, Mondays, Fridays	30
Surgery PM 30–Office Proctology	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital New York 29	S	IC	Lec, O, AV	10	11/ 6/58 4/16/59	11/ 7/58	C; 2 days	25
Proctology (Clinical and Cadaver)	New York Polyclinic Hospital 345 W. 50th St., New York 19	G	IC	Lab, PD, LC, BR, Lec, O	60	10/ 1/58 4/ 1/59	10/31/58	C; 24 days	175
Postgraduate Refresher Course in Proctology	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at Scott and White Memorial Hospitals, Scott, Sherwood and Brindley Foundation, Temple, Tex.	G Lim 2	IC	PD, LC, BR, Sem, Surg, O	88	Arranged		C; 12 days	25

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PSYCHIATRY

(See also General Practice, Neurology and Psychiatry, Pediatrics)

Psychiatric Problems in General Practice	University of Southern California School of Medicine Postgraduate Division 3025 Zonal Ave., Los Angeles 33	G Lim 75-100	II	PD, Lec	20	Unknown	I; 10 sessions 2 hr. weekly, Wednesdays	50
Therapeutic Interviewing of Patients with Emotional Problems	University of Southern California School of Medicine Postgraduate Division 3025 Zonal Ave., Los Angeles 33; course at Los Angeles County Hospital, Los Angeles 33	B Lim 10	II	PD, LC, EPP	24	10/15/58 1/14/59	I; 12 sessions 2 hr. weekly, Wednesdays	100
Practical Psychiatry in General Hospitals	University of California Medical Center Second and Parnassus Ave., San Francisco; course at Herrick Memorial Hospital, Berkeley, Calif.	G Lim 50	IC	PD, Sem, Lec, Pan, O	14	Fall/58	C; 2 days	40
Psychopharmacology	University of California Medical Center Second and Parnassus Ave., San Francisco	G Lim 100	IC	Lec, Pan, O, AV	14	Winter/ 1958-59	C; 2 days	40
Basic Psychiatry and Psychology	Program Director, Connecticut Postgraduate Seminar in Psychiatry and Neurology Connecticut State Hospital, Middletown, Conn.; course at Connecticut State Hospital, Middletown, Conn.	S Lim 50 to 70	II	Lec, O	66⅔	9/18/58 4/15/59	I; 30 sessions 2 hr. weekly, Wednesdays	Nil
Child Psychiatry	Program Director, Connecticut Postgraduate Seminar in Psychiatry and Neurology Connecticut State Hospital, Middletown, Conn.; course at Yale University School of Medicine, New Haven, Conn.	S Lim 40	II	Lec, O	18	2/11/59 3/18/59	I; 12 sessions 1½ hr. weekly, Wednesdays	Nil
Experimental Basis of Psychiatric Theory	Department of the Army Office of the Surgeon General Personnel and Training Division Washington 25, D. C.; course at Walter Reed Army Institute of Research, Washington 12, D. C.	S Restricted to military personnel Lim 15	IC	Lab, BR, Sem, Lec, O	160	2/ 9/59 3/ 6/59	C; 20 days	Nil
Forces in the Family; Emotional Interrelationships between Family Members	North Shore Hospital 225 Sheridan Road, Winnetka, Ill.	G	II	Lec, O, AV	18	10/ 1/58 6/ 3/59	I; 9 sessions 2 hr. mo. First Wednesday	Nil
Psychiatry for General Physicians	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	G	IC	PD, Lec, Pan, O, AV	11	11/19/58 11/20/58	C; 2 days	15
Clinical Traineeship in Psychiatry	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 2	PT	PD, LC, BR, Clin C, Sem, Lec, O, AV, EPP	Varies	Arranged at least 3 mo. later	Arranged	50 per mo. in state: 100 per mo. out of state
Pharmacology & Psychiatry Drugs Affecting Emotions	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	B Lim 50	IC	Sem, Lec, Pan, O	20	11/20/58 11/22/58	C; 2½ days	25
Basic Literature in Psychiatry, Chiefly psychoanalytic	Spring Grove State Hospital Wade Ave., Catonsville 28, Md.	S Lim 35	II	Sem, Lec, O	20	Unknown	I; 10 sessions 2 hr. weekly	35
Personality Development	Spring Grove State Hospital Wade Ave., Catonsville 28, Md.	S Lim 35	II	Sem, Lec, O	20	9/ 2/58 1/20/59	I; 10 sessions 2 hr. biweekly, Tuesdays	35
Psychiatry in General Practice	Office of Postgraduate Affairs University of Nebraska College of Medicine, 42nd and Dewey, Omaha	G	IC	Sem, Lec, Pan, O, AV TV, R	6	12/ 4/58 12/ 4/58	C; 1 day	Unknown
The Physician's Role in Mental Health	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Martland Medical Center, Newark, N. J.	G Lim 30	II	Lec, Pan, O	15	Unknown	I; 10 sessions 1½ hr. each	Unknown
Management of Psychiatric Problems in General Practice	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	IC	PD, Sem, Lec, Pan, O, AV	14	10/29/58 10/30/58	C; 2 days	30
Psychotherapy in Everyday Practice	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N. Y.; course at Meadowbrook Hospital, East Meadow, N. Y.	G Lim 15	II	Lec	15	10/ 1/58 12/ 3/58	I; 10 sessions 1½ hrs. weekly, Wednesdays	35
Intensive Psychotherapeutic Medicine	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N. Y.; course at Meadowbrook Hospital, East Meadow, N. Y.	G Lim 10	II	Sem	30	1/ 7/59 5/20/59	I; 20 sessions 1½ hr. weekly, Wednesdays	50

Key will be found on page 1954.

PSYCHIATRY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Psychoanalytic Contributions to Psychiatry	American Institute for Psychoanalysis 220 W. 98th St., New York	S Lim 30	II	Lec	22	9/ 8/58	12/15/58	I; 15 sessions 1½ hr. weekly, Mondays	60
Readings in Psychoanalysis. The Works of Freud	American Institute for Psychoanalysis 220 W. 98th St., New York	S Lim 30	II	Lec	30	9/ 9/58	1/27/59	I; 20 sessions 1½ hr. weekly, Tuesdays	80
Clinical Conferences on Case Histories I	American Institute for Psychoanalysis 220 W. 98th St., New York	S Lim 30	II	Sem	15	9/12/58	11/14/58	I; 10 sessions 1½ hr. weekly, Fridays	40
Problems in Therapy	American Institute for Psychoanalysis 220 W. 98th St., New York	S Lim 15	II	Sem	15	9/12/58	11/14/58	I; 10 sessions 1½ hr. weekly, Fridays	50
Continuous Case Seminar—Psychoanalysis	American Institute for Psychoanalysis 220 W. 98th St., New York	S Lim 20	II	Sem	18	9/ 9/58	11/25/58	I; 12 sessions 1½ hr. weekly, Tuesdays	60
Fundamentals of Psychoanalytic Technique	American Institute for Psychoanalysis 220 W. 98th St., New York	S Lim 30	II	Lec	30	9/ 8/58	1/26/59	I; 20 sessions 1½ hr. weekly, Mondays	80
Neuroses and Psychoses	American Institute for Psychoanalysis 220 W. 98th St., New York; course at New School for Social Research, New York	G Lim 50	II	Lec	22	9/29/58	1/12/59	I; 15 sessions 1½ hr. weekly, Mondays	27
Psychoanalytic Workshop on Human Behavior	American Institute for Psychoanalysis 220 W. 98th St., New York; course at New School for Social Research, New York	G Lim 50	II	Sem	22½	9/30/58	1/13/59	I; 15 sessions 1½ hr. weekly, Tuesdays	27
Seminar on Child Therapy, Psychoanalytic	American Institute for Psychoanalysis 220 W. 98th St., New York	S Lim 20	II	Sem, Lec	10½	11/21/58	1/16/59	I; 7 sessions 1½ hr. weekly, Fridays	28
Readings in Psychoanalytic Pioneers	American Institute for Psychoanalysis 220 W. 98th St., New York	S Lim 30	II	Lec	22½	2/ 2/59	5/18/59	I; 15 sessions 1½ hr. weekly, Mondays	60
The Psychoanalytic Process	American Institute for Psychoanalysis 220 W. 98th St., New York	S Lim 20	II	Sem, Lec	22½	2/ 2/59	5/18/59	I; 15 sessions 1½ hr. weekly, Mondays	75
Clinical Conferences—Psychoanalysis	American Institute for Psychoanalysis 220 W. 98th St., New York	S Lim 10	II	Sem	15	2/ 3/59	4/ 6/59	I; 10 sessions 1½ hr. weekly, Tuesdays	50
Theory of Neurosis	American Institute for Psychoanalysis 220 W. 98th St., New York	S Lim 30	II	Lec	22	2/ 3/59	5/18/59	I; 15 sessions 1½ hr. weekly, Tuesdays	60
Body Involvement in Emotional Conflict	American Institute for Psychoanalysis 220 W. 98th St., New York; course at New School for Social Research, New York	G Lim 50	II	Lec	22½	2/ 5/59	5/18/59	I; 15 sessions 1½ hr. weekly, Mondays	27
Body Involvement in Emotional Conflict	American Institute for Psychoanalysis 220 W. 98th St., New York; course at New School for Social Research, New York	G Lim 50	II	Lec	22½	2/ 5/59	5/18/59	I; 15 sessions 1½ hr. weekly, Mondays	27
Clinical Conferences on Case Histories II	American Institute for Psychoanalysis 220 W. 98th St., New York	S Lim 20	II	Sem	15	2/ 6/59	4/10/59	I; 10 sessions 1½ hr. weekly, Fridays	40
Workshop on Dreams	American Institute for Psychoanalysis 220 W. 98th St., New York	S Lim 30	II	Sem	15	2/ 6/59	4/10/59	I; 10 sessions 1½ hr. weekly, Fridays	50
Group Psychodynamics and Group Psychoanalysis	American Institute for Psychoanalysis 220 W. 98th St., New York; course at New School for Social Research, New York	G Lim 50	II	Lec	22½	2/10/59	5/19/59	I; 15 sessions 1½ hr. weekly, Tuesdays	27
Growth and Development of Personality from Infancy Through Adolescence	Dr. Harold Jacobziner, Assistant Commissioner New York City Department of Health 125 Worth St., New York	G Lim 40	II	Lec	24	4/59	6/59	I; 8 sessions 3 hr. weekly, Mondays	Nil
703 The Development of Psychoanalytic Thinking	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S also Ph.D Psychol., M.S. Social Workers Lim 25	II	LC, Lec	24	9/29/58 2/ 9/59 (Part II)	1/19/59	I; 16 sessions 1½ hr. weekly, Mondays	60

718 Clinical Conference on Treatment Planning	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S Lim 25	II	LC, Sem	24	9/30/58	1/13/59	I: 16 sessions 1½ hr. weekly, Tuesdays	60
Comprehensive Curriculum in Group Psychotherapy	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S also Ph.D. Psychol., M.S. Social Workers Lim 15	II	LC, Sem	Fall 66 Spring 68	9/20/58 2/10/59	6/6/59	I: Weekly, Tuesdays	500 per yr.
731 Clinical Conferences	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S Lim 25	II	LC, Sem	7½	10/1/58 3/11/59	10/29/58	I: 5 sessions 1½ hr. weekly, Wednesdays	20
715 Introduction to Psychotherapy and Psychotherapeutic Techniques	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S Lim 25	II	LC, Lec	18	10/1/58	12/17/58	I: 12 sessions 1½ hr. weekly, Wednesdays	60
717 Clinical Conferences	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S Lim 25	II	LC, Sem	22½	10/1/58	12/3/58	I: 15 sessions 1½ hr. weekly, Wednesdays	40
710 Seminar: Psychosomatic Medicine	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	G also Ph.D. Psychol. Lim 25	II	LC, Lec	22½	10/2/58	1/20/59	I: 15 sessions 1½ hr. weekly, Thursdays	60
706 Techniques of Dream Interpretation	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S Lim 25	II	LC, Sem	15	10/2/58	12/11/58	I: 10 sessions 1½ hr. weekly, Thursdays	40
733 Seminar: Psychosomatic Illness in Psychotherapeutic Practice	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	G Lim 25	II	LC, Lec	12	10/6/58 2/16/59	1/9/59	I: 8 sessions 1½ hr. weekly, Mondays	40
725 Audio Visual Techniques	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	Staff in Center but open to professional guests	II	LC, AV	12	11/24/58	1/19/59	I: 8 sessions 1½ hr. weekly, Mondays	Nil
724 Orientation into Projective Testing for Psychiatrists and Psychiatric Case-workers	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S Lim 25	II	LC, Lec	7½	12/10/58	1/14/59	I: 5 sessions 1½ hr. weekly, Wednesdays	20
727 Orientation Into Social Casework for Psychiatrist and Psychologists	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S also Ph.D. Psychol., M.S. Social Workers Lim 25	II	LC, Lec	7½	12/18/58	1/29/59	I: 5 sessions 1½ hr. weekly, Thursdays	20
817 Clinical Conferences: Character Disorders	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S Lim 25	II	LC, Sem	15	2/9/59	4/27/59	I: 10 sessions 1½ hr. weekly, Mondays	40
818 The Borderline Patient	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S Lim 25	II	LC, Sem	22½	2/11/59	5/27/59	I: 15 sessions 1½ hr. weekly, Wednesdays	60
806 Continuous Case Seminar	Postgraduate Center for Psychotherapy 218 E. 70th St., New York	S Lim 25	II	LC, Sem	12	3/18/59	5/13/59	I: 8 sessions 1½ hr. weekly, Wednesdays	40
Postgraduate Medicine II—Psychoanalysis	Western Reserve University School of Medicine Hanna Pavilion, 2040 Abington Rd., Cleveland	S Lim 15	II	Sem	30	10/58	7/59	I: 20 sessions 1½ hr. every 2 wk., Tuesdays	Nil
Psychiatric Problems Handled by the General Practitioner	Dr. Gaston B. Hannah, Secretary Southwestern Ohio Society of General Physicians Sharon and Willow Aves., Glendale, O.; course at University of Cincinnati College of Medicine, Cincinnati 29	G	IC	Sem, Lec, Pan, O, AV	8	3/1/59	3/1/59	C: 1 day	10
Psychotherapy for Physicians	University of Pittsburgh School of Medicine Staunton Clinic—3991 Fifth Ave., Pittsburgh 13	G Lim 16	II	Sem, O, EPP	30	10/1/58 1/7/59 3/18/59	12/10/58	I: 10 sessions 2 hr. weekly, Wednesdays or Thursdays	40
Psychoanalytic Psychiatry	Vermont State Hospital Waterbury, Vt.	S	II	PD, Sem, Lec	8	9/58 11/58	4/59	I: 4 sessions 2 hr. weekly, Thursdays	Nil

PULMONARY DISEASE

(See also Internal Medicine, Radiology)

11th Annual Symposium on Pulmonary Diseases	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20; course at Fitzsimons Army Hospital, Denver, Colo.	B	IC	PD, Sem, Lec, Pan, O, AV	40	9/8/58	9/12/58	C: 5 days	5

Key will be found on page 1954.

PULMONARY DISEASE—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Pulmonary Emphysema	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	G Lim 50	IC	Lec, Pan, O, AV	6	1/ 7/59	1/ 7/59	C; 1 day	10
Clinical Traineeship in Pulmonary Disease	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 2	PT	Lab, PD, LC, BR, Clin C, Sem, Lec, AV, EPP	160	11/ 3/58 1/ 2/59 4/ 1/59 5/ 1/59	11/29/58	30 days	50 per mo. in state; 100 per mo. out of state
Pulmonary Disease Clinic	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	IC	PD, BR, Lec, Pan, O, AV	14	1/19/59	1/20/59	C; 2 days	30
The Measurement of Pulmonary Function in Health and Disease	American Trudeau Society, Edward J. Welch, M.D., Chairman 1100 Beacon St., Brookline, Mass.; course at Boston City Hospital, Boston	S Lim 150	IC	PD, Clin C, Sem, Lec, Pan, O, AV	35	3/23/59	3/27/59	C; 5 days	75
Pulmonary Diseases	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G Lim 60	IC	PD, Clin C, Lec, Pan, O, AV	35	3/16/59	3/20/59	C; 5 days	50
Pulmonary Insufficiency	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	IC	PD, LC, Clin C, Sem, O, AV	6	11/30/58	11/20/58	C; 1 day	12
Eighth Annual Symposium for General Practitioners on Tuberculosis and Other Chronic Pulmonary Diseases	Trudeau Foundation 7 Church St., Saranac Lake, N. Y.; course also at Ray Brook State Tuberculosis Hospital, Ray Brook, N. Y.	G Lim 75	IC	PD, LC, BR, Lec, Pan, O	26	Summer/59		C; 5 days	50

RADIOISOTOPES
(See also Radiology)

882 b Practical Experience in the Laboratory Techniques Needed for Working with Radioactive Isotopes	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33	S Lim 2	PT	Lab		Arranged		Arranged	350
882 c Supervised Clinical Experience with Radioactive Isotopes	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33	S Lim 2	PT	PD, LC, BR	Unknown	Arranged		Arranged	165
882 a Lectures in the Physics and Clinical Application of Radioactive Isotopes	University of Southern California School of Medicine Postgraduate Division 2025 Zonal Ave., Los Angeles 33	S	II	Lec, O	20	Spring/59		I; 20 sessions 1 hr. weekly, Fridays	50
Principles and Clinical Uses of Radioisotopes	University of California Medical Center Second and Parnassus Ave., San Francisco	S	IC	Lab, BR, Sem, Lec, EPP	100	Arranged		C; 2 or 3 mo.	350
Radiology Physics and Medical Use of Isotopes	University of Colorado School of Medicine 4200 E. Ninth Ave., Denver 20	B Lim 20-25	II	PD, Sem, Lec		9/58	5/59	I; once weekly, Tuesdays for 9 mo.	10
The Clinical Uses of Radioisotopes	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	S Lim 24	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, O, EPP	60	9/29/58 3/ 4/59	10/10/58	C; 10 days	200
Course in Radioisotope Techniques and Nuclear Medicine	Department of Nuclear Medicine, U.S. Naval Medical School National Naval Medical Center, Bethesda 14, Md.	S Lim 12	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV, EPP	850	9/ 4/58 1/19/59	12/19/58	C; 95 days	Unknown*
Thyroid Disease and The Use of Radioactive Iodine	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Massachusetts General and Beth Israel Hospitals, Boston	S Lim 6	IC	Lab, PD, LC, Clin C, Lec	105	3/30/59	4/17/59	C; 18 days	300
Principles of Radioisotope Utilization	Director of the Summer Session Massachusetts Institute of Technology 77 Massachusetts Ave., Cambridge 39, Mass.	S Lim 100	IC	Lab, Lec	50	Summer/59		C; 10 days	Unknown
Medical Uses of Radioactive Isotopes	Queens General Hospital 82-68 164th St., Jamaica 32, N. Y.	S Training for AEC certification Lim 20	II	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, O, EPP	85	2/10/59	6/ 9/59	I; 17 sessions 5 hr. weekly, Tuesdays	250
Radiology PM 35—Use of Radioactive Iodine	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S Lim 2	IC	Lab, PD, LC, Lec, O, AV	144	9/58 12/58 3/59	12/58	C; 40 days	300

Radiology PM 41—Clinical Use of Radioactive Isotopes	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	II	Lab, Lec, O, AV	90	9/15/58	4/ 6/59	f; 30 sessions 3 hr. weekly, Mondays	300
Radiology PM 40—Clinical Use of Radioactive Isotopes	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinal Hospital, New York 29	G Lim 15	IC	Lab, Lec, O, AV	140	6/ 1/59	6/26/59	C; 20 days	300
656-A. Radioactive Isotopes	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 2	PT	Lab, PD, LC, BR, Clin C, Sem, EPP	150	Arranged	1 mo. later		175
658-A. Radioactive Isotopes	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 1	II	Lab, PD, LC, BR, Clin C, Pan, EPP	102	10/ 8/58	5/27/59	I; 34 sessions 3 hr. weekly, Wednesdays	100
Basic Course in Radioisotope Techniques	Oak Ridge Institute of Nuclear Studies P. O. Box 117, Oak Ridge, Tenn.	B Lim 48	IC	Lab, PD, LC, Sem, Lec, O, AV, EPP	103	9/ 8/58	9/28/58	C; 20 days	25
Medical Use of Radioisotopes	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at The University of Texas M.D. Anderson Hospital, Houston, Tex.	B and residents Lim 12	IC	Lab, PD, LC, Sem, Lec, EPP	100	5/ 4/59	5/29/59	C; 25 days	100
Clinical Application of Radioisotopes	School of Medicine, University of Puerto Rico San Juan 22, Puerto Rico	G Lim 3	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, Pan, O, AV, EPP	400	8/15/58 10/15/58 12/15/58 2/15/59 4/15/59 6/15/59	11/15/58	C; 90 days	Nil

RADIOLOGY

(See also Cardiovascular Disease, Occupational Medicine, Radioisotopes)

Diagnostic Radiology	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G		Lab, Sem, Lec, Pan, O, AV	Undetermined	Spring/59		Unknown	Unknown
Diagnostic Radiology	University of California Medical Center Second and Parnassus Ave., San Francisco	S Lim 100	IC	Lec, Pan, O, AV	35	4/ 4/59	4/ 8/59	C; 5 days	75
Neuroroentgenology	Program Director, Connecticut Postgraduate Seminar in Psychiatry and Neurology, Connecticut State Hospital, Middletown, Conn.; course at Yale University School of Medicine, New Haven, Conn.	S Lim 30 to 40	II	Lec, O	8	9/22/58	10/13/58	I; 8 sessions 1 hr. weekly, Mondays	Nil
Radiology 302—Introduction to X-rays and Radioistopes	Assistant Dean of Postgraduate Medical Education Yale University School of Medicine 333 Cedar St., New Haven, Conn.	S	II	Lec, O, AV	11	9/25/58	12/11/58	I; 11 sessions 1 hr. weekly, Thursdays	25
Radiology 303—X-ray Physics (Prerequisite Radiology 302)	Assistant Dean of Postgraduate Medical Education Yale University School of Medicine 333 Cedar St., New Haven, Conn.	S	II	Lab, Lec, O, AV	20	1/ 8/59	3/12/59	I; 10 sessions 2 hr. weekly, Thursdays	40
Radiology 304—Radioactivity (Prerequisites Radiology 302 & 303)	Assistant Dean of Postgraduate Medical Education Yale University School of Medicine 333 Cedar St., New Haven, Conn.	S Lim	II	Lab, O, EPP	30	8/19/59	5/21/59	I; 10 sessions 3 hr. weekly, Thursdays	150
Course II—Clinical Radiology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 6	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, O, EPP	50	Arranged	2 wk. later	C; 12 days	70
Course II—Clinical Radiology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 6	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, O, EPP	100	Arranged By appointment	4 wk. later	C; 24 days	125
Course III—X-Ray Therapy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 3	PT	Lab, PD, LC, BR, Clin C, Sem, Surg, Lec, Pan, O, EPP	30 to 240	Arranged By appointment	1, 2, 4 or 8 wk. later	6 to 24 days	60 to 300
Course I—Diagnostic Radiology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 16	IC	Lab, PD, LC, BR, Clin C, Sem, Lec, O, EPP	68	9/22/58 12/ 1/58 3/ 2/59 4/27/59 6/15/59	10/ 3/58	C; 12 days	125

Key will be found on page 1954.

RADIOLOGY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Radium Therapy	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 16	IC	Lab, PD, LC, BR, Clin C, Surg, O, EPP	30	6/ 1/59	6/ 5/59	C; 5 days	100
Radiation Physics	Northwestern University Medical School 303 E. Chicago Ave., Chicago 11	S Lim 60	II	Lec	36	1/ 5/59	4/13/59	I; 18 sessions 2 hr. weekly, Mondays	35 Practicing Physicians; 15 Residents
Radiation Therapy Seminar	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	S	II	Sem, Lec, O, AV	35	10/ 3/58	5/29/59	I; 35 sessions 1 hr. weekly, Fridays	5 per session
General Radiation Physics	Indiana University School of Medicine 1100 W. Michigan St., Indianapolis 7	S	II	Lec, O, AV	21	10/ 8/58	2/25/59	I; 21 sessions 1 hr. weekly, Wednesdays	100
Radiology	State University of Iowa College of Medicine University Hospitals, Iowa City	S	IC	PD, Lec, Pan, O, AV	9	10/10/58	10/11/58	C; 2 days	15
Radiological Physics	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	S	II	Lec, O	20	1/11/59	3/15/59	I; 10 sessions 2 hr. weekly, Sundays	30
Radiology and Radioactive Isotopes	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	S	IC	Clin C, Lec, Pan, O, AV	21	2/ 9/59	2/11/59	C; 3 days	45
General Radiology I	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Peter Bent Brigham Hospital, Boston	S Lim 2	IC	Lab, PD, LC, Clin C, Sem	120 to 150 a mo.	Arranged		Arranged	150 a mo.
Diagnostic Radiology	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G Lim 45	IC	Lec, Pan, O, AV	20	4/ 6/59	4/10/59	C; 5 days	50
Pediatric Radiology for Radiologists	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	S	IC	Sem, Lec, Pan, O, AV	33	11/ 3/58	11/ 8/58	C; 6 days	100
Radiology for General Physicians	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	IC	Lec, O, AV	15	4/ 6/59	4/ 8/59	C; 3 days	40
Modern Concepts in Roentgenology	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Martland Medical Center, Newark, N. J.	S Lim 30	II	Lec, AV	15	Unknown		I; 10 sessions 1½ hr. each	50
Use and Interpretation of Diagnostic X-Ray	University of Buffalo School of Medicine 3435 Main St., Buffalo	G	IC	Sem, Lec, Pan, O	14	9/17/58	9/18/58	C; 2 days	30
X-Ray Diagnosis	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N. Y.; course at Meadowbrook Hospital, East Meadow, N. Y.	G Lim 20	II	Lec	15	10/ 1/58	1/ 7/59	I; 15 sessions 1 hr. weekly, Wednesdays	30
Operative Use of Radium and Radioactive Sources	Queens General Hospital 82-68 164th St., Jamaica 32, N. Y.	S Lim 8	II	Lab, PD, LC, Clin C, Sem, Surg, Lec, Pan, O	24	11/ 1/58	12/20/58	I; 8 sessions 3 hr. weekly, Saturdays	100
Roentgen Diagnosis in Gastroenterology	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Beth-El Hospital, Brooklyn, N.Y.	G Lim 30	II	Lec, AV	8	10/58	12/58	I; 8 sessions 1 hr. weekly, Tuesdays	20
X-Ray Diagnosis of Chest Diseases, Heart and Lung	Beth-El Hospital Linden Blvd. & Rockaway Parkway, Brooklyn, N. Y.	G Lim 12	II	Lec, AV	12	4/17/59	5/29/59	I; 2 hr. weekly, Thursdays	20
Radiology PM 51—Radiotherapy	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	IC	Lab, LC, Lec, EPP		Unknown		C; 6 or 12 mo. full time	300 for 6 mo.; 600 for 12 mo.
Radiology PM 31—Chest	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	IC	Lec, O, AV	10½	9/30/58 3/16/59	10/ 7/58	C; 7 days	50

Radiology PM 80—Roentgenographic Interpretation of the Diseases of Bones and Joints	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Hospital for Joint Diseases, New York 25	G	II	Lec, O, AV	24	10/ 1/58	12/17/58	I: 12 sessions 2 hr. weekly, Wednesdays	150
Radiology PM 34—Chest, Differential Diagnosis	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G Lim 3	II	PD, LC	15	10/13/58 3/30/59	12/15/58	I: 10 sessions 1½ hr. weekly, Mondays	50
Radiology PM 1—Radiological Physics	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Columbia-Presbyterian Medical Center, New York 32	S	II	Lec, O, AV	36	1/12/59	5/15/59	I: 36 sessions 1 hr. twice weekly, Tuesdays, Thursdays	50
Radiology PM 32—Gastrointestinal Tract	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	G	IC	Lec, O, AV	10	3/ 2/59	3/13/59	C: 10 days	50
Radiology PM 33—Radium Therapy	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	S	II	Lec, O, AV	12	5/19/59	6/23/59	I: 6 sessions 2 hr. weekly, Tuesdays	50
X-Ray Diagnosis of Chest Diseases	Joint Committee on Post-Graduate Education 1313 Bedford Ave., Brooklyn, N. Y.; course at Beth-El Hospital, Brooklyn, N. Y.	G Lim 30	II	Lec, AV	8	4/15/59	6/10/59	I: 8 sessions 1 hr. weekly, Wednesdays	30
Roentgen Interpretation	New York Polyclinic Hospital 345 W. 50th St., New Yok 19	G Lim 12	IC	PD, Lec, O	480	10/ 1/58 4/ 1/59	12/31/58	C: 72 days	300
657-A. Radiological Aspects of Medicolegal Medicine	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 150	II	Sem, Lec, Pan, O, AV	18	9/23/58	12/ 9/58	I: 12 sessions 1½ hr. weekly, Tuesdays	35
651-A. Diagnostic Radiology For General Practitioners	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 50	II	Lec	60	9/24/58	4/29/59	I: 30 sessions 2 hr. weekly, Wednesdays	125
655-A. Clinical Radiation Therapy	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 2	II	PD, LC, BR, Clin C, Sem, Lec, O	54	10/ 1/58	1/28/59	I: 18 sessions 3 hr. weekly, Wednesdays	100
654-A. Radiobiology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	II	Sem, Lec	34	2/ 4/59	5/27/59	I: 17 sessions 2 hr. weekly, Wednesdays	75
Operative Radium Therapy—Operative Use of Radium and Radioactive Sources	Queens General Hospital 8248 164th St., Jamaica 32, N. Y.	S Lim 8	II	Lab, PD, LC, Clin C, Sem, Surg, Lec, Pan, O	24	11/ 1/58	12/20/58	I: 8 sessions 3 hr. weekly, Saturdays	100
Instructional Course	The Radiological Society of North America, Inc. 713 E. Genesee St., Syracuse, N. Y.; course at Palmer House, Chicago	S Lim 50	IC	Lab, PD, Lec, Pan, O	81½	11/16/58	11/21/58	C: 6 days	15
Physics of Radiology	The Frank E. Bunts Educational Institute 2020 E. 93rd St., Cleveland	S Lim 50	II	Sem, Lec, O	34	12/ 4/58	4/ 9/59	Unknown	30
Practical Course in Radiological Physics	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive, Houston 25, Tex.; course at The University of Texas M.D. Anderson Hospital, Houston, Tex.	B and residents Lim 6	IC	Lab, Sem, Lec, EPP	200	1/ 5/59	2/27/59	C: 40 days	200

SURGERY

(See also Anatomy, Basic Sciences, Cardiovascular Disease, Endoscopy, General Practice, Gynecology, Internal Medicine, Malignant Disease, Neurology, Pathology, Pulmonary Disease, Radioisotopes)

Clinical Sciences	College of Medical Evangelists 1720 Brooklyn Ave., Los Angeles 33	G Lim 20	IC	Lab, BR, Surg, Sem, Lec, Pan, Dem	1400	9/ 8/58	6/ 5/59	C: 175 days	800
Minor Surgery	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G Lim 80	IC	Lab, Sem, Lec, Pan, O, AV, EPP	12	9/ 5/58	9/ 6/58	C: 2 days	65 Lecture and Lab. 40 Lecture only
Removal of Foreign Bodies from Trachea and Bronchi	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G Lim 12	IC	Lab, Surg, Lec, O, AV, EPP	10	11/ 8/58	11/ 9/58	C: 2 days	100

Key will be found on page 1954.

SURGERY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Surgery of Trauma	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	Sem, Lec, Pan, O, AV		Fall/58		Unknown	Unknown
Techniques of Surgery	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G Lim 14	IC	Lab, Sem, Lec, O, AV, EPP	30	7/59		C; 5 days	500
Course in a Phase of Surgery	California Medical Assoc. 2975 Wilshire Blvd., Los Angeles; course at Stanford University, San Francisco	S Lim 60	IC	Surg, Lec, Pan, O	12	2/23/59	2/25/59	C; 3 days	25
Plastic Surgery	University of California Medical Center Second and Parnassus Ave., San Francisco	G Lim 100	IC	Lec, Pan, O, AV	7	11/13/58	11/13/58	C; 1 day	20
Hand Surgery	University of California Medical Center Second and Parnassus Ave., San Francisco	G Lim 100	IC	Lec, Pan, O, AV	7	11/14/58	11/14/58	C; 1 day	20
Course in General Surgery	University of California Medical Center Second and Parnassus Ave., San Francisco	G Lim 100	IC	PD, Surg, Lec, Pan, O, AV, TV	35	4/59		C; 5 days	75
A Series of Postgraduate Surgical Programs	U. S. Veterans Administration Hospital (Fort Miley) 42nd Ave. and Clement St., San Francisco	G Lim 300	II	Lab, PD, LC, Sem, Lec, Pan, O	12	10/14/58	11/18/58	I; 6 sessions 2 hr. weekly, Tuesdays	15 AAGP Mem.; 200 Non-Mem.
Oral Surgery	Department of the Army Office of the Surgeon General Personnel and Training Division Washington 25, D. C.; course at Walter Reed Army Institute of Research, Washington 12, D. C.	G (and Dentists) Restricted to members of the Federal Services	IC	PD, Clin C, Sem, Surg, Lec, O, AV, TV	40 to 45	1/ 5/59	1/ 9/ 59	C; 5 days	Nil
Surgery in Acute Trauma	Department of the Army Office of the Surgeon General Personnel and Training Division Washington 25, D. C.; course at Brooke Army Medical Center, Ft. Sam Houston, Tex.	G Lim 100	IC	Clin C, Sem, Lec	24	3/ 9/59	3/11/59	C; 3 days	Nil
Physiological Considerations in Surgery	Department of the Army Office of the Surgeon General Personnel and Training Division Washington 25, D. C.; course at Walter Reed Army Hospital, Washington 12, D. C.	S Restricted to members of the Federal Services Lim 50	IC	PD, Clin C, Sem, Lec, O, TV	44	4/ 6/59	4/11/59	C; 6 days	Nil
Surgery in Acute Trauma	Department of the Army Office of the Surgeon General Personnel and Training Division Washington 25, D. C.; course at William Beaumont Army Hospital, El Paso, Tex.	G Lim 100	IC	Lec		4/ 7/59	4/ 9/59	C; 3 days	Nil
Oral Surgery	Department of the Army Office of the Surgeon General Personnel and Training Division Washington 25, D. C.; course at Letterman Army Hospital, San Francisco	G (and dentists) Restricted to members of the Federal Services Lim 30	IC	Lab, LC, Sem, Lec, Pan, O, AV	40	4/20/59	4/24/59	C; 5 days	Nil
Seminar on Selected Topics in Surgery	University of Florida, College of Medicine Division of Postgraduate Education J. Hillis Miller Health Center Gainesville, Fla.	B	IC	PD, Clin C, Sem, Lec, Pan, O, AV	15	11/58		C; 2½ days	25
Professor Pro Tempore Surgery	Mt. Sinai Hospital of Greater Miami 4300 Alton Rd., Miami Beach 40, Fla.	S Lim 100	IC	PD, LC, BR, Clin C, Surg, Lec, Pan, O, AV	30	3/23/59	3/28/59	C; 6 days	25
Esophageal Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	S Lim 16	IC	PD, LC, BR, Surg, Lec, O, AV	25	9/15/58 6/15/59	9/19/58	C; 5 days	150
Course I in Surgical Technic	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 20	IC	Lab, PD, LC, BR, Surg, Lec, O, AV, EPP	90	9/15/58 9/29/58 10/27/58 11/10/58 12/ 1/58 2/ 2/59 2/16/59 3/16/59 4/20/59 5/11/59 6/15/59 7/20/59 8/17/59	9/27/58	C; 12 days	250

Surgery of Colon and Rectum	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 16	IC	Lab, PD, LC, BR, Clin C, Surg, Lec, O, AV	35	9/22/58 10/27/58 12/ 1/58 3/ 2/59 4/ 6/59 5/ 4/59 6/ 1/59	9/26/58	C; 5 days	125
Thoracic Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	S Lim 18	IC	Lab, PD, LC, BR, Surg, Lec, O, AV	30	9/22/58 6/22/59	9/27/58	C; 6 days	125
Annual Postgraduate Course of the United States Section of the International College of Surgeons	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	S Lim 50	IC	Lab, PD, LC, BR, Clin C, Surg, Lec, O, AV, EPP	78	10/13/58 7/ 6/59	10/25/58	C; 11 days	150
Basic Principles in General Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 20	IC	Lab, PD, LC, BR, Clin C, Surg, Lec, O, AV	85	10/13/58 4/ 6/59 7/ 6/59	10/24/58	C; 12 days	150
Blood Vessel Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 20	IC	Lab, PD, LC, BR, Clin C, Surg, Lec, O, AV	35	10/20/58 3/ 2/59	10/24/58	C; 5 days	125
One Week Course in General Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 16	IC	PD, LC, BR, Surg, Lec, O, AV	25	10/27/58 2/ 9/59 5/11/59	10/31/58	C; 5 days	150
Gallbladder Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 16	IC	PD, LC, BR, Surg, Lec, O, AV	10	11/ 3/58 3/30/59 6/ 1/59	11/ 5/58	C; 3 days	80
Surgery of Hernia	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 16	IC	Lab, PD, LC, BR, Clin C, Surg, Lec, O, AV	13	11/ 6/58 4/ 2/59 6/ 4/59	11/ 8/58	C; 3 days	80
General Surgery for the Specialist	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	S Lim 40	IC	Lab, PD, LC, BR, Clin C, Sem, Surg, Lec, O, AV	80	11/10/58 4/ 6/59	11/22/58	C; 12 days	250
Two-Week Course in General Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 18	IC	Lab, PD, LC, BR, Clin C, Surg, Lec, O, AV	70	11/10/58 5/ 4/59	11/22/58	C; 12 days	250
Breast and Thyroid Surgery	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 18	IC	Lab, PD, LC, BR, Clin C, Surg, Lec, O, AV	24	5/ 4/59	5/ 9/59	C; 6 days	150
General Surgery	Chicago Medical Society 86 E. Randolph St., Chicago; course at Hamilton Hotel, Chicago	G Lim 100	IC	Lec, Pan, O	29½	11/ 3/58	11/ 7/58	C; 5 days	75
General Surgery	State University of Iowa College of Medicine University Hospitals, Iowa City	G	IC	PD, BR, Lec, Pan, O, AV	18	12/ 9/58	12/11/58	C; 3 days	30
Surgery—Operative Clinics	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G Lim 25	II	Surg, Lec, O, AV, TV	32	11/19/58	3/18/59 (excluding December)	I; 4 sessions 8 hr. once mo., Wednesdays	50
Neurology and Neurosurgery	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	IC	PD, Lec, Pan, O, AV	14	2/25/59	2/26/59	C; 2 days	30
General Surgery	University of Kansas Medical Center 39th and Rainbow Blvd., Kansas City, Ks.	G	IC	PD, BR, Sem, Lec, Pan, O, AV	28	5/18/59	5/21/59	C; 4 days	60
Surgery of Trauma	Tulane University School of Medicine 1430 Tulane Ave., New Orleans	B Lim 50	IC	PD, Sem, Lec, Pan, O	20	2/26/59	2/28/59	C; 2½ days	25
General Surgery I	Harvard Medical School, Courses for Graduates 25 Shattuck St., Boston 15; course at Massachusetts General Hospital, Boston	G Lim 25	IC	PD, LC, BR, Clin C, Lec	110	10/14/58 6/ 1/59	10/31/58	C; 15 days	250
Clinical Exercises for Practitioners	University of Michigan Medical School Department of Postgraduate Medicine University Hospital, Ann Arbor, Mich.	G Lim 50	II	PD, LC, Clin C, Lec, Pan	80	10/ 8/58	2/25/59	I; 20 sessions 4 hr. weekly, Wednesdays	65
Surgery for Surgeons	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	S	IC	Surg, Lec, O, AV	15	1/22/59	1/24/59	C; 3 days	40
Emergency Surgery for General Physicians	Continuation Medical Education 1342 Mayo Memorial University of Minnesota, Minneapolis 14	G	IC	Lec, Pan, O, AV	15	4/ 2/59	4/ 4/59	C; 3 days	40
In Hospital Review In Surgery	Office of Postgraduate Affairs University of Nebraska College of Medicine 42nd and Dewey Sts., Omaha 5	G Lim 5 members Neb. A.G.P.	PT	PD, LC, BR, Clin C, Sem, Surg, O, AV, EPP	40	Autumn/58		5½ days	50

Key will be found on page 1954.

SURGERY—Continued

Title of Course	Location	Designed For	Type	Methods of Instruction	Total Hours	Starting Date	Ending Date	Time Arrangement	Fee
Recent Advances in Surgery	St. Michael's Hospital 306 High St., Newark, N. J.	G Lim 50	II	PD, Clin C, Lec, O, AV	18	9/58	2/59	I; 9 sessions 2 hr. mo., Saturdays	25
Clinical Surgery	Seton Hall College of Medicine and Surgery, Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Martland Medical Center, Newark, N. J.	G Lim 50	II	PD, Clin C, Lec, O, AV	15	Unknown		I; 10 sessions 1½ hr. weekly, Wednesdays	50
Experimental Vascular Surgery	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Martland Medical Center, Newark, N. J.	S Lim 15	II	Lab, O, AV, EPP	33	9/20/58	10/29/58	I; 11 sessions 3 hr. weekly, Saturdays	225
Surgical Techniques and Principles of Abdominal Surgery	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Martland Medical Center, Newark, N. J.	S Lim 20	II	Lab, Lec, O	9	10/14/58	12/19/58	I; 6 sessions 1½ hr. weekly, Fridays	100
Experimental Gastrointestinal Surgery	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Martland Medical Center, Newark, N. J.	G Lim 12	II	Lab, O, EPP	18	12/ 6/58	1/24/59	I; 6 sessions 3 hr. weekly	125
Surgical Physiology	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Martland Medical Center, Newark, N. J.	S Lim 30	II	Lec, O, AV	7½	1/ 7/59	2/ 4/59	I; 5 sessions 1½ hr. weekly, Wednesdays	35
Modern Concepts in Surgery	Seton Hall College of Medicine and Dentistry Department of Postgraduate Medical Education 31 Clinton St., Newark, N. J.; course at Monmouth Memorial Hospital, Long Branch, N. J.	G Lim 50	II	Lec, O, AV	15	3/10/59	5/12/59	I; 10 sessions 1½ hr. weekly, Tuesdays	50
Recent Advances in Surgery	Albany Medical College 47 New Scotland Ave., Albany 8, N. Y.	G	IC	PD, LC, Clin C, Sem, Pan, O, AV	6	2/12/59	2/12/59	C; 1 day	12
Management of the Cardiac Surgical Patient	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N. Y.; course at Meadowbrook Hospital, East Meadow, N. Y.	G	II	Lec	6	10/ 1/58	10/22/58	I; 4 sessions 1½ hr. weekly, Wednesdays	10
Office Surgery and Proctology	Nassau Academy of Medicine, Inc. 1200 Stewart Ave., Garden City, N. Y.; course at Meadowbrook Hospital, East Meadow, N. Y.	G Lim 8	II	LC, Lec	20	10/10/58	12/12/58	I; 20 sessions 1 hr. twice weekly, Wednesdays, Fridays	35
Medicine PM 65A-Peripheral Vascular Surgery	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Montefiore Hospital, New York 67	G Lim 15	II	PD, Sem, Lec, O, AV	51	11/12/58	3/18/59	I; 17 sessions 3 hr. weekly, Wednesdays	150
Surgery PM 31—Minor Surgery	Columbia University College of Physicians and Surgeons 630 W. 168th St., New York 32; course at Mount Sinai Hospital, New York 29	B Lim 8	IC	PD, LC, Lec, O, AV	24	12/ 1/58	12/ 3/58	C; 3 days	75
Thoracic Surgery (Cadaver demonstration)	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 8	II	LC, BR, Lec, O, AV, EPP	12	Arranged		I; 6 sessions 2 hrs. thrice weekly, Mondays, Wednesdays, Fridays	200
Vascular Surgery (Cadaver demonstrations)	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 10	II	Lec	16	Arranged		I; 2 hr. each on 8 Thursdays	200

Combined Surgical Course including Cadaver Surgery and Gynecology	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 20	IC	Lab, PD, LC, BR, Clin C, Lec, O, AV	420	10/ 1/58 4/ 1/59	11/30/58	C; 48 days	350
663-A. Recent Advances in Surgery	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 20	IC	PD, LC, Clin C, Sem, Lec, Pan	78	9/ 8/58	9/30/58	C; 11 days	200
669-A. Modern Concepts of the Etiology, Pathologic Physiology and Therapy of Diseases with Surgical Implications	New York University Post-Graduate Medical School 550 First Ave., New York 16	G	II	PD, Clin C, Lec, Pan, O, AV	111	9/11/58	6/18/59	I; 37 sessions 3 hr. weekly, Thursdays	200
551-A. The Intervertebral Disc	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 6	IC	PD, BR, Clin C, Surg, AV	14	10/ 9/58	10/10/58	C; 2 days	50
553-A. Problems in Practice Requiring Neurosurgical Investigation	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	IC	PD, LC, BR, Clin C, Surg, AV	35	10/13/58 4/27/59 6/22/59	10/17/58	C; 5 days	125
661-A. Review of General Surgery	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 20	IC	Lab, PD, LC, Clin C, Sem, Lec, Pan	176	10/20/58	11/15/58	C; 24 days	300
552-A. Diagnosis and Treatment of Peripheral Nerve Injuries	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 8	IC	Lab, PD, Surg, Lec, EPP	14	1/ 8/59	1/ 9/59	C; 2 days	50
662-A. Basic Problems in Cancer Therapy (For Surgeons)	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 20	IC	Lab, PD, Clin C, Sem, Lec, Pan, O, AV	88	1/19/59	1/31/59	C; 12 days	200
667-A. Surgery of the Hand	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 20	IC	PD, LC, Clin C, Sem, Surg, Lec, AV	42	3/16/59	3/21/59	C; 6 days	100
Recent Advances in Surgery	The Frank E. Bunts Educational Institute 2929 E. 93rd St., Cleveland	B Lim 125	IC	LC, Sem, Lec, Pan, O, AV	14	12/10/58	12/11/58	C; 2 days	25
Bronchology, Esophagology and Laryngeal Surgery	University of Pennsylvania Graduate School of Medicine 237 Medical Lab. Bldg., Philadelphia	S Lim 20	IC	PD, LC, Lec, O, AV		6/ 2/59	6/14/59	C; 14 days	250
A Postgraduate Review in Surgery	Vanderbilt University School of Medicine and Hospital 21st Ave. South, Nashville, Tenn.	G	IC	PD, LC, Clin C, Lec, Pan, O	6	Spring/59	Spring/59	C; 1 day	15
Surgery	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive, Houston 25, Tex.; course at Turner Home, El Paso, Tex.	G	IC	Lec, O, AV	7	12/ 6/58	12/ 6/58	C; 1 day	10
UROLOGY (See also Anatomy, Infertility)									
Office Urology	Department of Continuing Education in Medicine and Health Sciences University of California Medical Center Los Angeles 24	G	IC	PD, Lec, O, AV	6	2/59		C; 1 day	Unknown
Urology	University of California Medical Center Second and Parnassus Ave., San Francisco	G Lim 100	IC	Lec, Pan, O, AV	7	11/ 7/58	11/ 7/58	C; 1 day	20
James C. Kimbrough Urological Seminar	Department of the Army Office of the Surgeon General Personnel and Training Division Washington 25, D. C.; course at Brooke Army Medical Center, Ft. Sam Houston, Tex.	S Lim 100	IC	PD, BR, Lec	24	11/ 3/58	11/ 5/58	C; 3 days	Nil
Urology	Cook County Graduate School of Medicine 707 S. Wood St., Chicago 12	G Lim 12	IC	Lab, PD, LC, BR, Clin C, Surg, Lec, O, AV, EPP	80	10/13/58 3/30/59	10/25/58	C; 12 days	225
Urology Conference	State University of Iowa College of Medicine University Hospitals, Iowa City	S	IC	PD, BR, Surg, Lec, Pan, O, AV	9	9/26/58	9/27/58	C; 2 days	15
Instrumental and Operative Urology	New York Polyclinic Hospital 345 W. 50th St., New York 19	G Lim 12	IC	Lab, PD, LC, BR, Clin C, Lec, Pan, O, AV	64	10/ 1/58 4/ 1/59	10/31/58	C; 24 days	250
674-A. Refresher Course in Basic Urology	New York University Post-Graduate Medical School 550 First Ave., New York 16	G Lim 12	IC	Lab, Lec, O, EPP	35	1/12/59	1/16/59	C; 5 days	75
671-A. Advanced Course in Urology	New York University Post-Graduate Medical School 550 First Ave., New York 16	S Lim 16	IC	Lab, PD, BR, Clin C, Sem, Lec, O, EPP	70	5/11/59	5/22/59	C; 10 days	200
Trends in Urology	University of Texas Postgraduate School of Medicine 1400 Outer Belt Drive Houston 25, Tex.; course at The University of Texas M.D. Anderson Hospital, Houston, Tex.	B Lim 270	IC	Lec, Pan, TV	15	2/19/59	2/21/59	C; 3 days	35

Key will be found on page 1954.

MEDICINE AND THE LAW

TAX DEDUCTION OF EXPENSES OF POSTGRADUATE EDUCATION

The full text of the Internal Revenue Service regulation governing tax deduction of expenses of postgraduate education is herewith reproduced in full.

§ 1.162-5. **Expenses for education.**—(a) Expenditures made by a taxpayer for his education are deductible if they are for education (including research activities) undertaken primarily for the purpose of:

(1) Maintaining or improving skills required by the taxpayer in his employment or other trade or business, or

(2) Meeting the express requirements of a taxpayer's employer, or the requirements of applicable law or regulations, imposed as a condition to the retention by the taxpayer of his salary, status or employment.

Whether or not education is of the type referred to in subparagraph (1) of this paragraph shall be determined upon the basis of all the facts of each case. If it is customary for other established members of the taxpayer's trade or business to undertake such education, the taxpayer will ordinarily be considered to have undertaken this education for the purpose described in subparagraph (1) of this paragraph. Expenditures for education of the type described in subparagraph (2) of this paragraph are deductible under subparagraph (2) only to the extent that they are for the minimum education required by the taxpayer's employer, or by applicable law or regulations, as a condition to the retention of the taxpayer's salary, status, or employment. Expenditures for education other than those so required may be deductible under subparagraph (1) of this paragraph if the education meets the qualifications of subparagraph (1). A taxpayer is considered to have made expenditures for education to meet the express requirements of his employer only if the requirement is imposed primarily for a bona fide business purpose of the taxpayer's employer and not primarily for the taxpayer's benefit. Except as provided in the last sentence of paragraph (b) of this section, in the case of teachers, a written statement from an authorized official or school officer to the effect that the education was required as a condition to the retention of the taxpayer's salary, status, or employment will be accepted for the purpose of meeting the requirements of this paragraph.

(b) Expenditures made by a taxpayer for his education are not deductible if they are for education undertaken primarily for the purpose of obtaining a new position or substantial advancement in position, or primarily for the purpose of fulfilling the general educational aspirations or other personal purposes of the taxpayer. The fact that the education undertaken meets express requirements for the new position or substantial advancement in position will be an important factor indicating that the education is undertaken primarily for the purpose of obtaining such position or advancement, unless such education is required as a condition to the retention by the taxpayer of his present employment. In any event, if education is required of the taxpayer in order to meet the minimum requirements for qualification or establishment in his intended trade or business or specialty therein, the expense of such education is personal in nature and therefore is not deductible.

(c) In general, a taxpayer's expenditures for travel (including travel while on sabbatical leave) as a form of education shall be considered as primarily personal in nature and therefore not deductible.

(d) If a taxpayer travels away from home primarily to obtain education the expenses of which are deductible under this section, his expenditures for travel, meals, and lodging while away from home are deductible. However, if as an incident of such trip the taxpayer engages in some personal activity such as sightseeing, social visiting or entertaining, or other recreation, the portion of the expenses attributable to such personal activity constitutes nondeductible personal or living expenses and is not allowable as a deduction. If the taxpayer's travel away from home is primarily personal, the taxpayer's expenditures for travel, meals, and lodging (other than meals and lodging during the time spent in participating in deductible educational pursuits) are not deductible. Whether a particular trip is primarily personal or primarily to obtain education the expenses of which are

deductible under this section depends upon all the facts and circumstances of each case. An important factor to be taken into consideration in making the determination is the relative amount of time devoted to personal activity as compared with the time devoted to educational pursuits. Expenses in the nature of commuters' fares are not deductible.

(e) The provisions of this section may be illustrated by the following examples:

Example (1). A is employed by an accounting firm. In order to become a certified public accountant he takes courses in accounting. Since the education was undertaken prior to the time A became qualified in his chosen profession as a certified public accountant, A's expenditures for such courses and expenses for any transportation, meals, and lodging while away from home are not deductible.

Example (2). B, a general practitioner of medicine, takes a course of study in order to become a specialist in pediatrics. C, a general practitioner of medicine, takes a 2-week course reviewing developments in several specialized fields, including pediatrics, for the purpose of carrying on his general practice. B's expenses are not deductible because the course of study qualified him for a specialty within his trade or business. C's expenses for his education and any transportation, meals, and lodging while away from home are deductible because they were undertaken primarily to improve skills required by him in his trade or business.

Example (3). D is required by his employer (or by State law) either to read a list of books or to take certain courses giving six hours academic credit every two years in order to retain his position as a teacher. D fulfills the requirement by taking the courses and thereby receives an automatic increase in salary in his present position and salary schedule. Also, as the result of taking the prescribed courses, at the end of ten years, D receives a master's degree and becomes automatically eligible for an additional salary increase. Since D's purpose in taking the courses was primarily to fulfill the educational requirement of his employer, his expenses for such education and transportation, meals, and lodging while away from home are deductible.

Example (4). The facts are the same as in example (3) except that, due solely to a shortage of qualified teachers, D's employer does not enforce the prescribed educational requirements in that other teachers who do not fulfill those requirements are retained in their positions. D's expenses are nevertheless deductible.

Example (5). E, a high school teacher of physics, in order to improve skills required by him and thus improve his effectiveness as such a teacher, takes summer school courses in nuclear physics and educational methods. E's expenses for such courses are deductible.

Example (6). F takes summer school courses in order to improve skills required by him in his employment as a teacher. As a result of taking such courses F receives an in-grade increase in salary in his present position pursuant to a salary schedule established by the school system for which he works. F's expenditures for such courses are deductible.

Example (7). G, a graduate student at a university, plans to become a university professor. In order to qualify as a regular faculty member, G must obtain a graduate degree. While taking the required graduate courses, G is engaged in teaching at the university. G's expenses therefor are not deductible since he has not completed the education required to become qualified as a regular faculty member at the time he takes such courses.

Example (8). H, a self-employed tax consultant, decides to take a 1-week course in taxation, which is offered in City X, 500 miles away from his home. His primary purpose in going to X is to take the course, but he also takes a side trip to City Y (50 miles from X) for one day, takes a sightseeing trip while in X, and entertains some personal friends. H's transportation expenses to City X and return to his home are deductible but his transportation expenses to City Y are not deductible. H's expenses for meals and lodging while away from home will be allocated between his educational pursuits and his personal activities. Those expenses which are entirely personal, such as sightseeing and entertaining friends, are not deductible to any extent.

Example (9). The facts are the same as in example (8) except that H's primary purpose in going to City X is to take a vacation. This purpose is indicated by several factors, one of which is the fact that he spends only one week attending the tax course and devotes five weeks entirely to personal activities. None of H's transportation expenses are deductible and his expenses for meals and lodging while away from home are not deductible to the extent attributable to personal activities. His expenses for meals and lodging allocable to the week attending the tax course are, however, deductible. [Reg. § 1.162-5.]

MEDICAL NEWS

ALABAMA

Land Purchased by Medical Center.—Expansion of the University of Alabama Medical Center, Birmingham, was revealed in formal ceremonies in the University Hospital Auditorium June 9 with transfer of a deed to a 10½-block area. Mr. Hill Ferguson, chairman pro-tem of the university board of trustees, delivered a check for $2,654,990 to the Housing Authority of the Birmingham District in return for the deed, culminating seven years of work. The acquisition of the 10½-block area was made possible by the passage of Amendment No. 4 by the voters of Alabama in 1957. Expansion projects to be started soon in the Medical Center are student housing quarters and a 2½-million-dollar nurses' residency. Already being constructed is a 2-million-dollar six-story research building.

Hospital News.—The Susie Parker Stringfellow Memorial Hospital, a $365,000 one-story building with equipment, which was dedicated in Anniston in January, replaces a private residence operated at the same location for many years as a tuberculosis sanatorium. The hospital was financed through Mrs. Stringfellow's endowment in conjunction with funds from the Hill-Burton Act.—The second floor of the new addition to the Jackson Hospital and Clinic, Montgomery, was recently dedicated to the late Dr. John Randolph Penton Sr., former president of the hospital and clinic. A portrait of Dr. Penton hangs in the hall of the second floor and the section will be called the Penton section of the hospital.

CALIFORNIA

Announce Awards for Heart Research.—Awards totaling $165,770.40 to support heart research at local medical schools and hospitals have been announced by the Los Angeles County Heart Association. The 23 awards include a $50,000 grant in support of the Heart Association's Cardiovascular Research Laboratory at the University of Southern California School of Medicine, Los Angeles, in addition to funds for one established investigator, four research fellowships, and 17 grants-in-aid to institutions. Dr. Mitchel D. Covel, research committee chairman, said the awards were made possible by voluntary gifts to the 1958 Heart Fund. The funds will support several new studies and continue others during the next 12 months.

Physicians are invited to send to this department items of news of general interest, for example, those relating to society activities, new hospitals, education, and public health. Programs should be received at least three weeks before the date of meeting.

Dr. Ward Appointed Department Chairman.—Appointment of Dr. Robert Ward as physician-in-chief and director of research at Childrens Hospital and professor and chairman of the department of pediatrics at the University of Southern California School of Medicine, Los Angeles, has been announced. Dr. Ward, formerly professor of pediatrics at New York University, New York City, succeeds Dr. Merl J. Carson, now on sabbatical leave to take advanced training at the Neurological Institute, Queen's Square, London, England. Dr. Ward has served as president and secretary of the Society for Pediatric Research and is a fellow of the American Academy of Pediatrics and a member of the Commission on Viral Infections, Armed Forces Epidemiological Board.

Medical Care Center in Hemet.—The Friendly Hills Fellowship, a nonprofit foundation established "to provide a center where doctors and ministers may refer people not only in need of medical care, but also seeking peace of mind and a greater degree of spiritual awareness," has announced that its facilities are now available. These include the 560-acre Friendly Hills Ranch, two staff houses, and Meadowlark Farm, which is a 30-acre estate with a central house, two guest cottages, a staff house, stables, a swimming pool, and a picnic house. Financing of the foundation is partially from the resident guests and from contributions. President of the fellowship is Dr. Evarts G. Loomis Jr., who, in addition to his general practice in the Hemet community, began the Friendly Hills Ranch five years ago. Dr. David F. Meens, formerly engaged in a similar program in Colorado, is also on the staff. For information write Dr. Loomis at the Friendly Hills Fellowship, Route 1, Box 397, Hemet, Calif.

DISTRICT OF COLUMBIA

Narcotics Violation.—Dr. Norbert P. Gillem, 1733 U Street, N. W., Washington, D. C., was arrested on July 23, 1957, by officers of the Metropolitan Police Department for violations of the narcotic law. On April 14, 1958, he pleaded guilty in Federal Court, Washington, D. C., to violation of the District of Columbia Uniform Narcotic Drug Act, and on May 2, 1958, was sentenced to six months imprisonment by Judge Bolitha J. Laws.

Personal.—Theodore Koppanyi, Ph.D., chairman, department of pharmacology, Georgetown University Medical Center, has received an award to participate in the International Educational Exchange

Program under the Fulbright Act. He will lecture in pharmacology at the Hebrew University, Jerusalem, Israel, during the 1958-1959 academic year.—Dr. John C. Rose, associate professor of medicine, Georgetown University Medical Center, has been appointed acting chairman of the department of physiology effective July 1. He succeeds Charles F. Morgan, Ph.D., who resigned to become research professor of pharmacology.

Dr. Peabody Honored by Chest Physicians.—Dr. J. Winthrop Peabody, past-president of the American College of Chest Physicians, was presented with the college medal and certificate of award "for meritorious achievement in the specialty of disease of the chest" at the annual meeting June 21. The award was given in recognition of Dr. Peabody's "unselfish devotion to the aims and ideals of the College since its foundation, but particularly to the advancement of postgraduate medical education." Since its inception in 1946 he has served as chairman of the Council on Postgraduate Medical Education of the college. In 1951 he was awarded the Vicennial Medal "for long and distinguished service." He was elected emeritus professor at Georgetown in 1957, marking 36 years of continuous teaching in the university. In 1953 he was awarded a certificate of merit by the Department of Public Health for 37 years of service. He served as first Chairman of the Section on Diseases of the Chest, American Medical Association, which was organized in 1952.

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FLORIDA

Plan New Hospital in Miami.—A group of 75 members of the Dade County Medical Association are proceeding with plans to build a 200-bed hospital, the Cedars of Lebanon, in Miami. This is to be a nonprofit, nonsectarian institution and is planned to include air-conditioning and modern facilities for private patient care. The hospital will be located on the old Country Club grounds adjoining the projected Baptist Hospital, close enough to Jackson Memorial to form a part of the over-all patient-care facilities in the University of Miami School of Medicine environs. Initial funds for construction are being raised by the sale of interest-bearing bonds, part of which have been guaranteed by the founding group. The deficit of hospital beds is aggravated by the increases in population, reportedly at the rate of 20 additional beds per month.

ILLINOIS

Student Health Center at Northwestern.—A new health center for students of Northwestern University will be started early in 1959 on the Evanston campus, Dr. J. Roscoe Miller, president, has announced. The project, to be known as Searle Health Center, will cost $800,000, which will be provided as a gift to the University by John G. Searle, of Winnetka, a vice-president of the university's board of trustees and president of G. D. Searle & Co., Chicago medical research and pharmaceutical manufacturing organization. Searle Health Center will be a part of the university's 138½-million-dollar long-range development plan. Construction is scheduled to begin in March, 1959, and completion and dedication are scheduled for January, 1960. Preliminary plans provide for a two-story building with clinic facilities on the ground floor and an infirmary on the top floor.

Chicago

Service for Chronically Ill Persons.—The Central Service for the Chronically Ill of The Institute of Medicine of Chicago was established in 1943 to help patients who need continuing care, either at home or in a nursing home, get information about the services available for their care. The organization is supported by the Chicago Medical Society, the Community Fund of Chicago, the Chicago Community Trust, foundations, and individuals. The service provides information on nursing services, special equipment, therapy, and costs for home care, and management, treatment, feeding and care, and costs for nursing home care. Dr. Henry L. Schmitz is president of the board of directors for the service. For information write The Central Service for the Chronically Ill, The Institute of Medicine of Chicago, 86 E. Randolph St., Chicago 1; phone, FI 6-2677.

Hospital News.—John N. Hatfield, director of Passavant hospital, has been named recipient of the 1958 distinguished service award of the American Hospital Association. The award, given for "outstanding leadership in hospital administration," will be presented Aug. 20 at the association's annual convention. Mr. Hatfield has been director of Passavant hospital since 1952.—New medical staff officers installed at Mercy Hospital May 24 include chief of staff, Dr. Joseph E. Laibe; vice-president, Dr. Cornelius M. Annan; and secretary-treasurer, Dr. William F. Cernock. Nominated to serve on the executive board of the hospital are Dr. Arkell M. Vaughn and Dr. Harold C. Voris.

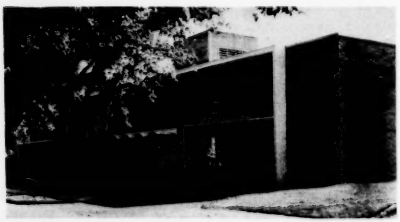
Dr. Moseley to Head Department of Radiology.—Dr. Robert David Moseley Jr. has been named professor and chairman of the department of radiology, University of Chicago, effective July 1, succeeding Dr. Paul C. Hodges, who has reached retirement age. Dr. Moseley came to the University of Chicago in 1949 as an assistant resident in radiology. In 1950 he was assigned by the university to the Los Alamos Special Research Project, and in 1951 he became a staff member, Radiobiological Research Group, at the Los Alamos Scientific Laboratory of

the University of California at Los Alamos, N. M. He returned to the University of Chicago as an instructor in the department of radiology in 1954; he became assistant professor and clinical fellow of the American Cancer Society in 1955 and associate professor in 1957. In January, 1958, he was appointed to the staff of the Argonne Cancer Research Hospital.

Personal.—Honorary membership in the Royal College of Surgeons in London has been awarded to Dr. Warren H. Cole, head, department of surgery, Chicago Professional Colleges of the University of Illinois. Dr. Cole, who is also surgeon-in-chief at the University of Illinois Hospitals, also received honorary fellowship in the Royal College of Surgeons of Edinburgh, Scotland.——Dr. John A. D. Cooper, professor of biochemistry and assistant dean of Northwestern University Medical School, left July 11 for South America to give a month-long course at the University of Buenos Aires on the use of radioisotopes in medicine.——The annual achievement award, given by the Immigrants' Protective League to a distinguished citizen of foreign birth, was presented to Dr. John J. Sheinin, president of Chicago Medical School, on April 17th. Dr. Sheinin received this honor for his "important accomplishments in the field of education."—Dr. Ladislas J. Meduna has announced his resignation as president of the Brain Research, Incorporated, effective April 1.

KANSAS

Dedicate Rehabilitation Center.—The Children's Rehabilitation Unit of the University of Kansas Medical Center, Kansas City, a new building consisting of two stories and a basement and providing 28,500 square feet of classrooms, treatment rooms, play areas and offices, was dedicated May 25. It is connected with the rest of the buildings in the medical center by a tunnel entrance into the basement. The unit will be used primarily to train teachers and technicians in the care of handicapped children. University students in medicine, speech therapy, education, psychology, and social work will receive clinical experience at the unit. Assistant dean Dr. Cecil A. Miller is medical director of the unit and Dr. Louise de Schweinitz has been appointed intake officer. The $375,000 project was built without state tax money. The cost of construction and furnishings was provided from private contributions and Hill–Burton funds. An award of $45,000 a year renewable each year for five years has been received from the Children's Bureau of the United States Department of Health, Education, and Welfare.



The Children's Rehabilitation Unit, University of Kansas Medical Center, Kansas City.

KENTUCKY

Memorial Marker for Dr. Northcutt.—Late this summer, or in the early fall, the dedication and unveiling ceremony of the marker in honor and memory of the late Dr. Joseph Doniphan Northcutt will be held in Devou Park, Covington. Permission to erect this marker was granted to a memorial committee composed of a group of physicians and surgeons of Campbell and Kenton counties. Dr. Northcutt was born in 1881 in Bracken County and died in 1956 in Kenton County. He was a fellow of the American College of Surgeons.

MARYLAND

Appoint Director of Department of Pathology.—Dr. Ivan L. Bennett Jr., professor of medicine, Johns Hopkins University School of Medicine, Baltimore, has been appointed professor and director of the department of pathology in the university and pathologist-in-chief to the Johns Hopkins Hospital. Dr. Bennett succeeds as Baxley Professor and director of pathology, Dr. Arnold R. Rich, who is retiring after 43 years' association with the Hopkins medical institutions. Dr. Bennett becomes the fourth person to hold these appointments. He first came to the university as assistant in pathology, 1949-50, then joined the resident medical staff at Duke University Hospital, Durham, N. C., 1950-51, and served 1951-52 as resident in medicine at Grady Hospital, Atlanta, Ga. He returned to Hopkins in 1954 from Yale University, New Haven, Conn., where he was assistant professor of medicine. In 1957, Dr. Bennett was promoted from associate professor to professor.

Personal.—Appointment to the National Advisory Heart Council of Dr. Edwin C. Andrus, associate professor of medicine and chief of the division of cardiology, department of medicine, Johns Hophins University Medical School, Baltimore, has been announced.——Detlev W. Bronk, LL.D., president of the Rockefeller Institute, has announced the election of Philip Bard, Ph.D., dean of the medical faculty and professor of physiology, Johns Hopkins University School of Medicine, Baltimore, to the institute's board of trustees.——The Surgeon General of the U. S. Public Health Service has anannounced the appointment of Dr. Arnold B Kur-

lander, of Bethesda, to the newly created post of Assistant Surgeon General for Operations. Dr. Kurlander will assist in coordinating the programs of the service's three major operating bureaus and perform special assignments for the Surgeon General.

MICHIGAN

George Kamperman Annual Lectureship Instituted.—On March 27 Wayne State University College of Medicine, Detroit, officially notified Dr. George A. Kamperman of the institution of the George Kamperman Annual Lectureship of Wayne State University College of Medicine, and personally handed to him a citation. Dr. Kamperman was chief of the department of obstetrics and gynecology at Harper Hospital, Detroit, from 1922-1945. Since his retirement he was appointed a member of the board of trustees of Harper Hospital. He was a founding member and first president of the Detroit Gynecological Society and again served as president when this society was reorganized to form the Michigan Society of Obstetricians and Gynecologists. He was a founding member of the Central Association of Obstetricians and Gynecologists and is a past-president of this organization. He is a fellow of the American College of Surgeons.

MISSOURI

Teachenor Memorial Fund.—A memorial fund has been established to honor the late Dr. Frank Randall Teachenor who helped pioneer the specialty of neurological surgery. Under the organization of a Teachenor Memorial Committee, contributions are being received to build a Frank Randall Teachenor Memorial Operating Theater in the new Research Hospital Medical Center at Kansas City. Anyone wishing to participate may make a contribution to the Frank Randall Teachenor Memorial Fund Committee in care of the Research Hospital, 23rd and Holmes Streets, Kansas City, Mo.

Summer Fellowships for Students.—Twenty-four students at the Saint Louis University School of Medicine have been awarded 1958 summer fellowships totaling $14,800 and are engaged in research projects ranging from 8 to 12 weeks of study. The student research program is supported by awards from the U. S. Public Health Service, Lederle Laboratories, Cancer Research Fund, Tobacco Industry, National Foundation for Infantile Paralysis, Allergy Foundation of America, Children's Research Foundation, and Saint Louis University Biochemistry Committee on Grants. The summer fellowships are awarded annually "to provide an opportunity for the medical students to have first hand experience with research problems" and do not substitute for any of the regular school requirements. Students are selected on the basis of their own initiative and interest, providing they qualify in academic standing. Each project is created by the student and is submitted to the scrutiny of faculty members.

NEW YORK

Annual Postgraduate Week.—The second annual Postgraduate Week of the New York Academy of Medicine will be held Oct. 13-17 with the theme "Research Contributions to Clinical Practice." A total of 15 lectures will be presented under the following panel headings and chairmen:

The Diagnosis and Management of Cerebral Vascular Diseases, Dr. Irving S. Wright, Cornell University Medical College.

Influenza and Upper Respiratory Infections, Dr. Walsh McDermott, Cornell University Medical College.

Glomerulonephritis and Pyelonephritis, Dr. William Goldring, New York University College of Medicine.

Potassium Therapy, Dr. Saul J. Farber, New York University College of Medicine.

The Radiation Hazard, Dr. Joseph E. Rall, National Institutes of Health, Washington, D. C.

A scientific exhibit is planned. Registration is required of nonfellows of the academy, though no fee will be charged. For information write Dr. Robert L. Craig, Secretary, New York Academy of Medicine, 2 E. 103rd St., New York 29.

New York City

Laboratory for Research in Reproduction.—A fertility research laboratory has been established at the Margaret Sanger Research Bureau for the purpose of studying the physiology of reproduction as well as evaluating methods for the control of conception. Studies on sperm migration, the time required for the sperm to enter the cervix, and other reproductive processes are already under way. Over 70 products that are being used for contraceptive purposes have been studied and evaluated in the bureau's research laboratories. The work is under the direction of Dr. Abraham Stone, director of the bureau, and John MacLeod, Ph.D., of Cornell University.

Personal.—Dr. James T. Daniels Jr., associate professor of neurosurgery at New York University–Bellevue Medical Center Post-Graduate Medical School, has accepted the post of director of research of the new Misericordia General Hospital. He will direct the research staff in applied and basic medical research, and will continue in his position of chief of neurosurgery. The new 9-million-dollar general hospital is in its final construction stages.——Dr. Charles A. Ragan Jr., professor of clinical medicine, Columbia University College of Physicians and Surgeons, has been appointed to serve through September, 1962, on the National Advisory Arthritis and Metabolic Diseases Council.

NORTH DAKOTA

State Medical Election.—Dr. Oliver A. Sedlak, Fargo, was elected president of the North Dakota State Medical Association at its annual meeting in Minot. Other officers include: Dr. John C. Fawcett, Devils Lake, president-elect; Dr. Carroll M. Lund, Williston, first vice-president; Dr. Edwin H. Boerth, Bismarck, second vice-president; Dr. G. Alfred Dodds, Fargo, speaker of the House of Delegates; Dr. Ralph E. Leigh, Grand Forks, vice-speaker; Dr. Richard D. Nierling, Jamestown, secretary; Dr. Ernest J. Larson, Jamestown, treasurer; and Dr. Willard A. Wright, Williston, delegate to the American Medical Association.

OHIO

Handbook for Treatment of Radiation Accidents.—At the request of the Atomic Energy Commission, a handbook for physicians who must treat victims of serious radiation or nuclear accidents is being compiled by the University of Cincinnati College of Medicine department of radiology and radioisotope laboratory, in cooperation with the AEC's division of biology and medicine. Dr. Eugene L. Saenger, director of the radioisotope laboratory and associate clinical professor of radiology, is editor and chairman of the handbook committee. The AEC has given a $5,600 two-year grant for the work. The handbook will outline possible accidents and will list emergency procedures for exposed humans and the accident area and guide the collection of data to be used in preparation for future accidents. Assisting Dr. Saenger with the manual are Dr. Charles M. Barrett, professor of therapeutic radiology and Dr. Mitchell R. Zavon, assistant professor of industrial medicine, both of Cincinnati university, and Dr. Joseph A. Quigley, of the National Lead Co., at Fernald.

PENNSYLVANIA

Expand Program in Nuclear Technology.—The University of Pittsburgh has been awarded a $30,000 grant by the Atomic Energy Commission for the acquisition of equipment and instruments to be used in the teaching of nuclear technology as applied to the life sciences. The award supports an expanded program of training in radiation health within the university's department of occupational health. The program was recently established by a 10-year grant from the Rockefeller Foundation. Dr. Niel Wald will head the Pittsburgh radiation health program faculty. Dr. Wald served the department of radiobiology, USAF School of Aviation Medicine, for two years. In 1954, he joined the National Research Council's Atomic Bomb Casualty Commission in Hiroshima as senior hematologist for three years. Other members of this training group are Prof. Herman Cember, Dr. Albert A. Spritzer, and Mr. Joseph A. Watson. This group is responsible for the radiation health program on the campuses of the university and of the Carnegie Institute of Technology, as well as in industrial establishments and hospitals in the community. Physicians interested in advanced training in radiation health should address inquiries to the Secretary, Graduate School of Public Health, University of Pittsburgh, Pittsburgh 13.

Personal.—George Denton Beal, Ph.D., will retire as a director of research at Mellon Institute Aug. 31, after 32 years of service. For 25 years Dr. Beal took part in the periodic revision of the United States Pharmacopeia. He is president of the American Council on Pharmaceutical Education, and a member of the Board of Trustees of the convention which prepares the Pharmacopeia.—Dr. Edmund R. McCluskey, professor and head of the department of pediatrics, University of Pittsburgh, has been named vice-chancellor of the schools of the health professions at the university, effective July 1. He succeeds Dr. Robert A. Moore, who resigned to become president of the Downstate Medical Center of the State University of New York.—Dr. Robert J. Halen, Pittsburgh, has been appointed Works Physician at the Pittsburgh Works of Jones & Laughlin Steel Corporation, succeeding Dr. C. Merle Bundy, Pittsburgh, who has resigned.

Philadelphia

University Lecture.—Dr. George Rosen, Columbia University Faculty of Medicine, New York City, will give the first annual Victor Robinson Lecture in History of Medicine at Temple University School of Medicine Sept. 23, 4-5 p. m., in the medical school auditorium. This lectureship is named in honor of Dr. Victor Robinson, professor of history of medicine at Temple University from 1929 until his death in 1947. Dr. Rosen is editor of the *American Journal of Public Health.*

TENNESSEE

Dr. Patterson Appointed Dean at Vanderbilt.—The appointment of Dr. John W. Patterson as director of medical affairs and dean of the Vanderbilt University School of Medicine, Nashville, has been announced. Dr. Patterson, dean of the Faculty of Medicine at the University of British Columbia, Vancouver, Canada, will come to Vanderbilt in September to succeed Dr. John B. Youmans, who is resigning to become head of medical research for the U. S. Army. Dr. Patterson, who lived in India from the age of 3 until he was 18, taught chemistry for a year at the University of Vermont before he and his wife began the study of medicine at Western Reserve, Cleveland, where she became a pediatrician and he a teacher of anatomy and associate dean of the medical school. He has been dean at British Columbia since 1956.

TEXAS

Texas Gerontological and Geriatrics Societies Merge.—Final plans for the merging of the Texas Gerontological Society and the Texas Geriatrics Society have been made. The Texas Geriatrics Society, organized in 1955, has been open to physicians. The Texas Gerontological Society, organized in 1956, has been open to professional and lay members interested in aging. The merged groups will have membership in excess of 500 and will work closely with the special committee created by the Texas Legislature in May, 1957, to study the problems of the aged. The new society will have five divisions: clinical medicine, biological sciences, psychological and social sciences, social work and administration, and general membership. Officers will be elected following the annual meeting of the Texas Gerontological Society, in Austin, Nov. 14-15, at the Driskell Hotel. For information write Mr. Herbert Shore, president, Texas Gerontological Society, 2525 Centerville Road, Dallas 28, Texas.

VERMONT

Internists Form State Chapter.—A Vermont Chapter of the American Society of Internal Medicine is being organized. The initial meeting was held in Middlebury in early June. Dr. William A. Pratt, Rutland, was elected temporary chairman; Dr. Robert A. Walker was appointed chairman of a committee to develop a constitution and by-laws; Dr. Robert E. O'Brien, 11 Mansion St., Winooski, was selected as chairman of the committee to contact charter or founding members. Charter members are those who are diplomates of the American Board of Internal Medicine or members of the American College of Physicians. Others, who limit their practices to internal medicine, may apply for membership following the adoption of the constitution and by-laws.

WASHINGTON

Plan Institute for Heart and Cancer Research.—Preliminary plans for the S. Maimon Samuels Institute for Heart and Cancer Research have been approved by the Board of Regents, University of Washington, Seattle. To be built attached to the south wing of the University's Teaching and Research Hospital, the three-story building will be devoted entirely to heart and cancer research laboratories, with the exception of an entrance and waiting room. A major portion of the cost, estimated at $800,000, was a gift of Dr. and Mrs. S. Maimon Samuels, of Seattle. Construction is scheduled to start within a year.

WEST VIRGINIA

Annual Meeting in White Sulphur Springs.—The 91st annual meeting of the West Virginia State Medical Association will be held Aug. 21-23 at The Greenbrier, White Sulphur Springs. Dr. Charles A. Hoffman, of Huntington, president of the association, will present an address at the opening session. The program includes the following papers by out-of-state speakers:

Allergic Reactions of the Respiratory System, Including Sinus Involvement, Dr. J. Warrick Thomas, Richmond, Va.
Practical Considerations in the Use of Blood, Dr. Paul I. Hoxworth, Cincinnati.
Obesity, Vitamins and Women, Dr. Philip Thorek, Chicago.
Urological Emergencies, Dr. Theodore R. Fetter, Philadelphia.
Gas, Smother and Choke, Dr. David M. Little Jr., Hartford, Conn.
Surgical Emergencies, Dr. Vinton E. Siler, Cincinnati.
Endarterectomy for Coronary Artery Disease, Dr. Charles P. Bailey, Philadelphia.
Stress as a Therapeutic Friend, Dr. Howard A. Rusk, New York City.

A special discussion, "Investment Program for the Physician," will be held the morning of Aug. 23. Technical and scientific exhibits and motion-picture sessions are planned. Entertainment includes golf and skeet and trap shooting tournaments. For information write the West Virginia State Medical Association, Box 1031, Charleston 24, W. Va.

Personal.—Dr. Joseph M. Parker, superintendent of Hawthornden State Hospital near Cleveland, Ohio, has accepted an appointment as superintendent of Barboursville State Hospital, succeeding Dr. William S. Sadler.——The College of William and Mary June 8 bestowed upon Dr. Walter E. Vest, of Huntington, the honorary degree of master of arts "in appreciation of scholarship and service to humanity." Benjamin Franklin was the first to receive this honorary degree (in 1756). A few such degrees were conferred in the mid-decades of the nineteenth century; however, Dr. Vest is the first to be given the degree honoris causa in the twentieth century.——Dr. Richard J. Lilly, of Topeka, Kansas, formerly of Pontiac, Mich., has been appointed superintendent of Weston State Hospital (mental), at Weston. He succeeds Dr. Azby A. Milburn, who has been acting superintendent at the institution since Dr. H. Sinclair Tait resigned in April, 1957, to accept appointment as senior psychiatrist at the VA Regional Office in Wheeling.

GENERAL

Symposium on Pulmonary Diseases in Denver.—The 11th annual Pulmonary Diseases Symposium will be conducted at Fitzsimons Army Hospital, Denver, Sept. 8-12. Students representing the Armed Services, Veterans Administration, U. S. Public Health Service, state and local institutions, as well as private practitioners, are invited. Fitzsimons Army Hospital is the Army's center for chest and pulmonary diseases. Instructors for this symposium will be chosen from its specialists and from the staff of the University of Colorado Medi-

cal School. For information write the Public Information Office, Fitzsimons Army Hospital, Denver 8.

Prevalence of Poliomyelitis.—According to the National Office of Vital Statistics, the following number of reported cases of poliomyelitis occurred in the United States, its territories and possessions in the weeks ended as indicated:

Area	July 19, 1958		July 20, 1957
	Paralytic Type	Total Cases	Total
New England States			
Maine	..	..	1
New Hampshire	..	..	..
Vermont	..	1	..
Massachusetts	..	..	2
Rhode Island	..	..	..
Connecticut	..	..	3
Middle Atlantic States			
New York	3	6	7
New Jersey	2	3	..
Pennsylvania	..	..	3
East North Central States			
Ohio	1	6	10
Indiana	1	1	4
Illinois	1	4	13
Michigan	1	4	10
Wisconsin	1	3	15
West North Central States			
Minnesota	..	2	2
Iowa	..	..	2
Missouri	1	2	6
North Dakota	..	..	..
South Dakota	..	..	..
Nebraska	..	1	4
Kansas	..	5	4
South Atlantic States			
Delaware	..	..	..
Maryland	..	..	..
District of Columbia	1	3	..
Virginia	3	5	2
West Virginia	..	1	2
North Carolina	1	2	17
South Carolina	..	..	6
Georgia	..	..	2
Florida	8	23	2
East South Central States			
Kentucky	1	1	8
Tennessee	1	5	7
Alabama	..	..	2
Mississippi	..	6	8
West South Central States			
Arkansas	1	2	4
Louisiana	1	1	9
Oklahoma	1	2	14
Texas	15	24	33
Mountain States			
Montana	2	3	1
Idaho	..	1	1
Wyoming	..	..	..
Colorado	1	1	..
New Mexico	..	..	4
Arizona	..	..	2
Utah	..	..	..
Nevada	..	..	..
Pacific States			
Washington	..	..	..
Oregon	..	..	5
California	5	7	37
Territories and Possessions			
Alaska	..	..	..
Hawaii	7	7	..
Puerto Rico	8	8	2
Total	62	135	254

Personal.—Dr. Carlos Luis Gonzalez, of Venezuela, formerly minister of health and social welfare, assumed the duties of assistant director of the Pan American Sanitary Bureau in Washington, D. C., June 16. He studied at the School of Hygiene of Johns Hopkins University of Baltimore, first with a grant from the Rockefeller Foundation and then with one from his government, obtaining the degree of doctor of public health in 1948. He was a member of the executive board of the World Health Organization and also delegate from Venezuela to the first Inter-American Congress of Hygiene which met in Havana in 1952.

Statement on BCG by Chest Physicians.—The Executive Council of the American College of Chest Physicians at an annual meeting recently held in San Francisco passed the following resolution: "In view of the vital interest in improving public health and welfare, and in the eradication of diseases of the chest in particular, our position regarding the use of BCG (bacillus Calmette–Guerin) against tuberculosis in the United States should be made known. At the present time, there is insufficient evidence that significant protection is afforded by its use. The Council fully endorses the antituberculosis control program of the U. S. Public Health Service, which includes research in BCG, and urges the continued support of their program."

Medical Research Fellowships and Grants.—The Life Insurance Medical Research Fund is receiving applications for two types of awards to be available July 1, 1959, as follows: (1) Until Oct. 15, for postdoctoral research fellowships. Candidates may apply for support in any field of the medical sciences. Preference is given to those who wish to work on fundamental problems, especially those related to cardiovascular function or disease. Minimum stipend is $3,800, with allowances for dependents and necessary travel. (2) Until Nov. 1, for grants to institutions in aid of research on cardiovascular problems. Support is available for physiological, biochemical, and other basic work related to cardiovascular problems as well as for clinical research in this field. Information and application forms may be obtained from the Scientific Director, Life Insurance Medical Research Fund, 345 E. 46th St., New York 17.

National Allergy Month.—Sponsored by the Allergy Foundation of America, the second annual National Allergy Month has been announced for Aug. 15-Sept. 15. A free pamphlet, "Hay Fever and Other Allergic Diseases," has been prepared by the foundation as part of the program of public information and education and may be obtained by writing to P. O. Box 1005, Grand Central Station, New York City 17. The foundation furnishes information, gives guidance to those seeking medical care, supports research and training programs, and "seeks to im-

prove facilities for clinical and hospital care." It works closely with the American Academy of Allergy, the American College of Allergists, and the National Institute of Allergy and Infectious Diseases of the U. S. Public Health Service. Dr. Charles D. Marple, New York City, is the director of the foundation. For information write the Allergy Foundation of America, 801 Second Ave., New York 17.

Foundation for Research in Neurological Diseases.—The National Neurological Research Foundation has been organized and chartered in Washington, D. C., "to provide research into the prevention and cure of chronic, progressive disorders of the nervous system" by establishing fellowships and by supporting research for work in the neurological field. The distribution of fellowships and research projects, as funds become available, will be directed by a Scientific Advisory Committee, comprised of the following: Dr. Raymond D. Adams, Boston; Edward W. Dempsey, Ph.D., Dr. Oliver H. Lowry and Dr. James L. O'Leary, St. Louis; Dr. Louis S. Goodman, Salt Lake City; Dr. Seymour S. Kety, Bethesda, Md.; Horace W. Magoun, Ph.D., Los Angeles; and Dr. A. Earl Walker, Baltimore. The fellowships will be $10,000-$12,000 a year, for a period of five years. The foundation will supplement the activities of existing organizations. Money will be raised by contributions from the public and from foundations. For information write the National Neurological Research Foundation, 3255 N Street, N. W., Washington 7, D. C.

Western Surgeons Meeting in Reno.—The Western Regional Meeting of the United States Section of the International College of Surgeons will be held Aug. 21-23 at the Riverside Hotel, Reno, Nevada. An opening day panel on problems in general practice will be moderated by Dr. Ross T. McIntire, Chicago, executive director of the college. About 25 papers will be presented. Speakers will include: Drs. Franz K. Bauer, James N. Wilson, and Telfer B. Reynolds, Los Angeles; Gerald B. O'Connor, George W. Pierce, and Charles P. Mathe, San Francisco; Edward L. Compere, Chicago; A. James McAllister, Salt Lake City; Roger Anderson, Seattle; Robert P. O'Donnell, Las Vegas; Harry E. Bacon, Philadelphia, and Col. Clinton S. Maupin, M. C., U. S. Army, Washington, D. C. Dr. Curtice Rosser, Dallas, president of the U. S. Section, will present "Polyps of the Large Bowel" the afternoon of Aug. 21. Medical motion picture sessions, exhibits, question-and-answer periods, and a ladies' program are arranged. The American Academy of General Practice will give its attending members category II credit. Membership in the college is not required for attendance. For information write Dr. Frederick M. Anderson, 275 Hill St., Reno, Nev., general chairman.

CANADA

International Meeting on Genetics in Montreal.—The 10th International Congress of Genetics will be held Aug. 20-27 at McGill University, Montreal. The presidential address will be given Aug. 20 by Sewall Wright, LL.D. The program has over 40 topics, including multiple sessions of the following: "Mutations Induced by Ionizing Radiations," "Plant Cytology," "Biochemical Genetics," "Human and Medical Genetics," and "Animal Breeding." The Huskins Memorial Lecture will be held Aug. 19, 8 p. m., in the auditorium of the University of Montreal. Exhibits and pre- and post-congress tours are planned. Registration fee is $7.50 (Canadian). For information write the X International Congress of Genetics, McGill University, Montreal 2, Province of Quebec, Canada.

LATIN AMERICA

Congress on Mental Health in Peru.—The third Latin American congress on Mental Health will be held Oct. 27-Nov. 1 in Lima, Peru. The program will be presented under the following six general topics:

Mental Illness in Urban and Rural Areas.
Problems of Mental Health Dependents of Internal and External Migration.
Chronic Intoxication in Latin America.
Work and Mental Health.
Organization of the Community.
Social Problems of the Community.

Twenty-two sub-topics are arranged under the major themes. Physicians from the United States and Canada are invited to present papers. For information write Dr. Prado Baltazar Caravedo, Secretario General, III Congreso Latino-Americano de Salud Mental, Departamento de Higiene Mental, Natalio Sánchez 215, 3er. Piso, "G", Lima, Perú.

FOREIGN

International Meeting on Neuro-Psychopharmacology in Rome.—Organized by the Collegium Internationale Neuro-Psychopharmacologicum, the first international meeting on neuropsychopharmacology will be held in Rome Sept. 8-12 under the presidency of Prof. Ernest Rothlin, Basle, Switzerland, and Prof. Emilio Trabucci, (president of the Rome meeting). Titles for the two plenary sessions are: "The Present Status of Neurochemistry" and "The Impact of Psychotropic Drugs on the Structure, Function and Future of Psychiatric Services (a) in the hospitals and (b) in extra-mural clinics and private practice." The following symposiums are planned:

Methods and Analysis of Drug-Induced Abnormal Behavior in Animals.
Methods and Analysis of Drug-Induced Abnormal Mental States in Man.

Comparison of Abnormal Behavioral States Induced by Psychotropic Drugs in Animals and Man.
Comparison of Drug-Induced and Endogenous Psychoses in Man.

The official languages will be English, French, Italian, and German, with simultaneous translations available for the first three languages. At a reception at Campidoglio, Professor Rothlin, will present an address, and at a reception at Castel Gandolfo, the group will be addressed by His Holiness, Pope Pius XII. For information write Dr. Herman C. B. Denber, Manhattan State Hospital, 600 E. 125th St., New York 35.

EXAMINATIONS AND LICENSURE

MEDICAL SPECIALTY BOARDS

AMERICAN BOARD OF ANESTHESIOLOGY: *Oral Examination.* San Francisco, Sept. 29-Oct. 3, and Phoenix, April 5-10, 1959. The 1959 written examination will be given in various locations in the United States and Canada, July 17. The final date for filing application for the 1959 written examination is six months prior to the examination. There is no filing deadline for oral examinations. Sec., Dr. Curtiss B. Hickcox, 217 Farmington Ave., Hartford 8, Conn.

AMERICAN BOARD OF DERMATOLOGY: *Written. Several Cities,* June 30. *Oral.* Detroit, Oct. 17-19. Final date for filing all applications is April 1. Sec., Dr. Beatrice Maher Kesten, One Haven Ave., New York 32.

AMERICAN BOARD OF INTERNAL MEDICINE: *Written.* Oct. 20, 1958. *Oral.* Chicago, Oct. 13-16. *1959 Schedule—Written,* Oct. 19. Final date for filing application is May 1. *Oral.* For candidates in the South and Southwest, New Orleans, Feb. 3-6. Final date for filing application is Jan. 1. *Oral.* For candidates in the Midwest. Chicago, April 15-18. Final date for filing application is Jan. 1. *Oral.* For candidates on the West Coast. Final date for filing application is March 1. *Oral.* For candidates on the East Coast, Nov. 6-7, 9-10. Final date for filing application is March 1. *Examination in the Subspecialties. Gastroenterology.* Philadelphia, April 17-18. Final date for filing application is Feb. 1. Sec.-Treas., Dr. William A. Werrell, One West Main St., Madison 3, Wis.

AMERICAN BOARD OF NEUROLOGICAL SURGERY: Examination given twice annually, in the spring and fall. In order to be eligible a candidate must have his application filed at least six months before the examination time. Sec., Dr. Leonard T. Furlow, Washington University School of Medicine, St. Louis 10.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY: Applications for certification, new and reopened, Part I, and requests for re-examination Part II, are now being accepted. All candidates are urged to make such application at the earliest possible date. Deadline date for receipt of application is September 1, 1958. No application can be accepted after that date. It should be noted by prospective candidates that the deadline date in 1959 is August 1. Sec., Dr. Robert L. Faulkner, 2105 Adelbert Road, Cleveland 6.

AMERICAN BOARD OF OPHTHALMOLOGY: *Written,* qualifying test (Part I), January 1959. Final date for filing application was July 1, 1958. *Oral Examinations 1958* (Part II): Chicago, Oct. 17-22. Sec., Dr. Merrill J. King, Box 236, Cape Cottage Branch, Portland, Maine.

AMERICAN BOARD OF ORTHOPAEDIC SURGERY: *Part II.* Chicago, Jan. 21-23, 1959. Deadline for receipt of applications was Aug. 15. Sec., Dr. Sam W. Banks, 116 South Michigan Avenue, Chicago 3.

AMERICAN BOARD OF OTOLARYNGOLOGY: *Oral.* Chicago, Oct. 6-10. Final date for filing application was April 30. Sec., Dr. Dean M. Lierle, University Hospitals, Iowa City.

AMERICAN BOARD OF PATHOLOGY: Chicago, Oct. 30-Nov. 1. Final date for filing application is Sept. 30. Sec., Dr. Edward B. Smith, Indiana University Medical Center, 1100 W. Michigan St., Indianapolis 7.

AMERICAN BOARD OF PEDIATRICS: *Oral.* Chicago, Oct. 24-26 and New York, Dec. 5-7. Sec., Dr. John McK. Mitchell, 6 Cushman Road, Rosemont, Pa.

AMERICAN BOARD OF PLASTIC SURGERY: *Oral and Written.* Chicago, Oct. 9-11. Final date for receipt of case reports was July 1. Corresponding Secretary, Mrs. Estelle E. Hillerich, 4647 Pershing Ave., St. Louis 8.

AMERICAN BOARD OF PREVENTIVE MEDICINE: *Examination in Public Health.* St. Louis, Oct. 24-26. Final date for filing application was Aug. 15. Sec., Dr. Thomas F. Whayne, 3438 Walnut St., Philadelphia 4.

AMERICAN BOARD OF PROCTOLOGY: *Oral and Written, Parts I and II.* September 1958. Final date for filing application is March 15. Sec., Dr. Stuart T. Ross, 520 Franklin Ave., Garden City, N. Y.

AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY: New York City, Dec. 15-16; New Orleans, Mar. 16-17. Training credit for full time psychiatric and/or neurologic assignment in unapproved military programs or services between the dates of Jan. 1, 1950 and Jan. 1, 1954 will be terminated on Jan. 1, 1959. Sec., Dr. David A. Boyd, 102-110 Second Ave. S. W., Rochester, Minn.

AMERICAN BOARD OF RADIOLOGY: *Regular Examination.* Washington, D. C., Dec. 8-11. Final date for filing application was July 1. *Special examination in Nuclear Medicine for those diplomates in Radiology or Therapeutic Radiology.* Washington, D. C., Dec. 6. Final date for filing application is Oct. 1. *Special Examination.* Cincinnati, Mar. 16-19, 1959. Final date for filing application is Nov. 1. Candidates completing training June 30, 1959 are not eligible for the Spring 1959 examinations. Sec., Dr. H. Dabney Kerr, Kahler Hotel Bldg., Rochester, Minn.

AMERICAN BOARD OF SURGERY: Written examinations (Part I) will be held at various centers in the United States, Canada, Hawaii, Puerto Rico, and certain military centers abroad on December 3. The date of the Fall examination in *Part I* has been changed from the last Wednesday of October as announced in its current Booklet of Information to December 3, 1958. Thereafter, examinations in Part I will be held once annually, on the first Wednesday of December. The closing date for filing applications will be August 1. *Part II.* Philadelphia, Sept. 15-16; Rochester, Minn., Oct. 20-21; Nashville, Tenn., Nov. 17-18; New York City, Dec. 15-16; Houston, Tex., Jan. 12-13; New Haven, Conn., Feb. 9-10; Durham, No. Car., March 9-10; San Francisco, April 13-14; Indianapolis, May 11-12; Columbus, Ohio, May 14-15. Sec., Dr. John B. Flick, 1617 Pennsylvania Blvd., Philadelphia 3.

BOARD OF THORACIC SURGERY: Various centers throughout the United States. *Written.* Spring of 1959. Final date for filing application is December 1. Sec., Dr. Wm. M. Tuttle, 1151 Taylor Avenue, Detroit 2.

AMERICAN BOARD OF UROLOGY: *Written Examination.* Twenty-five cities throughout the country, Dec. 5. The oral will be given in Chicago in February 1959. Sec., Dr. William Niles Wishard, Jr., 30 Westwood Road, Minneapolis 26.

GOVERNMENT SERVICES

NAVY

Aviation Medicine Training Program.—The new graduate training program of the Naval School of Aviation Medicine at Pensacola, Fla., is designed to prepare selected flight surgeons for certification in aviation medicine by the American Board of Preventive Medicine. The program was reviewed in May, 1955, when the American Board of Preventive Medicine convened at the School of Aviation Medicine with representatives of the American Medical Association. Department heads and faculty were interviewed at length to determine their qualifications, teaching methods, and experience, and the school was approved for two years' formal credit in Aviation Medicine by the American Board of Preventive Medicine in the summer of 1956.

Lieut. Commander David P. Morris, M. C., U. S. N., on July 16, 1958, became the first naval medical officer to complete residency training in aviation medicine at the school. Dr. Morris served as flight surgeon at NAS, Columbus, Ohio, and at Sangley Point in the Philippines. In preparation for residency training in aviation medicine, he spent a year at the Johns Hopkins University School of Hygiene and Public Health. He has published and collaborated in the authorship of several research papers, including "Reduction of Metabolic Rate at Simulated High Altitude" and "Studies on Oxygen Toxicity During Heavy Work." He now assumes his new billet as senior medical officer and flight surgeon aboard the USS Essex.

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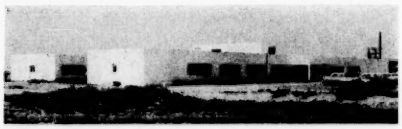

The newly commissioned U. S. Naval Dispensary at Rota, Spain.

One Hundred Ninety-two Receive Internship Certificates.—The surgeon general has announced that as of July 3, 1958, 192 Navy Medical Corps lieutenants had completed their internship training under the Navy's one-year rotating internship training program. They received their internship certificates at 14 of the Navy's 23 continental United States hospitals where internship training is administered. A number of the graduated officers are being assigned to duty at medical department activities at sea and ashore, while others will receive further training in their particular specialties.

VETERANS ADMINISTRATION

Personal.—Dr. George E. Armstrong, New York City, director of the New York University–Bellevue Medical Center and formerly surgeon general of the Army, has been made chairman of the VA Special Medical Advisory Group, succeeding Dr. Robert M. Zollinger of Columbus, Ohio, whose term as chairman expired June 30. The group meets quarterly to advise the Administrator of Veterans Affairs on matters related to medical care and treatment of veterans.

PUBLIC HEALTH SERVICE

Report on Disability.—Due to illness or injury, the American people stayed home from work, stayed in bed, or otherwise cut down on normal activities for a total of 662,800,000 days during the period July-September, 1957. If this rate were applied to a full year, the number of days of restricted activity would average about 16 per person per year. These estimates are contained in a report by the Public Health Service "Preliminary Report on Disability, United States, July-September 1957." The report includes all age groups. As of August, 1957, about 17 million persons, or 10% of the population, had chronic health conditions which caused continuing limitations in their normal activities. Women and girls accounted for more days of restricted activity than men and boys, averaging 17.5 days per year as compared with 14.1 for males. Children under 5 years of age averaged 6.4 days a year of restricted activity, while people 65 years and over averaged 44.4. An estimated 227.9 million patient-days were spent in bed, a rate of about 5.5 days in bed for each person a year. The number of man-days lost from work was about 126,800,000 during the quarter, which amounts to an annual rate of 7.9 work-loss days for each employed person during the year. Copies of the new report may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., for 30 cents each.

Dr. Hoge Accepts Post in Chicago.—Dr. Vane M. Hoge, who is retiring from the Public Health Service after 30 years of service, has been appointed executive director of the newly-created Hospital Planning Council of Metropolitan Chicago, effective Sept. 15. The council was organized early this year by a group of Chicago business and civic leaders to aid in planning new and improved hospital facilities necessary for the rapidly growing metropolitan area. Dr. Jack C. Haldeman has been appointed chief of the Division of Hospital and Medical Facilities of the Public Health Service to succeed Dr. Hoge.

DEATHS

Abell, Nathan Douglas, Louisville, Ky.; University of Louisville Medical Department, 1909; also a graduate in pharmacy; member of the Kentucky State Medical Association; died June 18, aged 83, of chronic pyelonephrosis and arteriosclerotic heart disease.

Albrecht, Henry Francis, Sand Lake, N. Y.; Albany (N. Y.) Medical College, 1906; an associate member of the American Medical Association; for many years health officer of Green Island, N. Y.; physician for Selective Service during World War II; on the honorary staff, St. Mary's Hospital in Troy; died June 8, aged 74, of acute myocardial infarction.

Argabrite, Otho Paul, Alderson, W. Va.; University of Maryland School of Medicine, Baltimore, 1907; died June 12, aged 74, of heart disease.

Atlas, Lawrence N. Ⓜ Laguna Beach, Calif.; born in Akron, Ohio, Aug. 8, 1906; Western Reserve University School of Medicine, Cleveland, 1930; served on the faculty of his alma mater and the University of Southern California School of Medicine in Los Angeles; fellow of the American College of Surgeons; member of the Central Society for Clinical Research; practiced in Los Angeles, where he was on the staffs of the Hospital of the Good Samaritan, Mount Sinai, Los Angeles County, and Cedar of Lebanon hospitals, and the St. Joseph Hospital in Burbank; died in the Hoag Memorial Hospital in Newport Beach May 20, aged 51.

Bartling, Carl Herman Ⓜ Rockford, Ill.; Northwestern University Medical School, Chicago, 1913; member of the American Society of Anesthesiologists; specialist certified by the American Board of Anesthesiology; interned at the Cook County Hospital in Chicago; veteran of World Wars I and II; served on the staff of the Veterans Administration Hospital Center in Temple, Texas; retired from the Veterans Administration May 31, 1955; on the staffs of Rockford Memorial and St. Anthony hospitals; died in the Veterans Administration Hospital in Hines June 8, aged 68, of bilateral bronchopneumonia.

Beam, Albert Ⓜ Americus, Kan.; University Medical College of Kansas City, Mo., 1908; on the staff of the Newman Memorial County Hospital, Emporia, June 1, aged 86.

Black, Walter Munro, St. Marys, Pa.; University of Pennsylvania Department of Medicine, Philadelphia, 1898; formerly associated with the Eastern State Penitentiary; died June 12, aged 84.

Ⓜ Indicates Member of the American Medical Association.

Bohrer, Edward Royse Ⓜ Jefferson City, Mo.; Washington University School of Medicine, St. Louis, 1934; secretary of the Missouri State Medical Association; member of the American Academy of General Practice; secretary of the Cole County Medical Society; veteran of World War II; on the staff of the state division of health; on the staff of St. Mary's Hospital; died June 4, aged 49, of arteriosclerotic heart disease.

Bowman, William Townzen, Greenview, Ill.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1906; died in St. John's Hospital in Springfield June 9, aged 84.

Boyer, Samuel P., Brooksville, Fla.; University of Pittsburgh School of Medicine, 1916; veteran of World War I; died in the Hernando County Hospital June 10, aged 76, of lymphosarcoma.

Busbee, Olin Dantzler, Springfield, S. C.; Medical College of the State of South Carolina, Charleston, 1911; served as mayor; veteran of World War I; died in the Veterans Administration Hospital, Columbia, June 9, aged 70, of hypertension, arteriosclerotic heart disease with myocardial infarction and diabetes mellitus.

Chideckel, Maurice, Baltimore; College of Physicians and Surgeons, Baltimore, 1908; also a rabbi; author of many books; died June 20, aged 75, of coronary arteriosclerosis.

Clement, John B. Ⓜ Lester Prairie, Minn. (licensed in Minnesota in 1900); died in Glencoe May 10, aged 82, of heart disease.

Cole, William Andrew Ⓜ Savannah, Ga.; University of Georgia Medical Department, Augusta, 1913; specialist certified by the American Board of Radiology; on the staff of the Warren Candler Hospital, where he died June 13, aged 74, of cardiac decompensation.

Colgan, Robert Clinton Ⓜ Bridgeport, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1925; specialist certified by the American Board of Otolaryngology; veteran of World War I; on the faculty of the University of Pennsylvania Graduate School of Medicine in Philadelphia, where he was on the staff of the Hospital of the University of Pennsylvania; died June 7, aged 59, of myocarditis with coronary sclerosis.

Cummer, Clyde Lottridge Ⓜ Cleveland; born in Cadillac, Mich., Feb. 23, 1882; Western Reserve University Medical Department, Cleveland, 1907; from 1909 to 1946 on the faculty of his alma mater,

where he served successively as teacher and associate professor of clinical pathology and assistant clinical professor of dermatology and syphilology; specialist certified by the American Board of Dermatology and Syphilology; at one time chairman of the public health council of the Ohio Department of Health; formerly member of the Council on Scientific Assembly, member of the House of Delegates, and chairman of the Section on Dermatology and Syphilology of the American Medical Association; past-president of the Ohio State Medical Association; for many years treasurer of the American Academy of Dermatology and Syphilology, of which he was past-president; past-president of the Academy of Medicine of Cleveland and was the winner of its 1942 distinguished service award; past-president of the Cleveland Medical Library Association, serving as chairman of the board from 1929 to 1937 and secretary of the committee for building the Allen Memorial Library Building from 1923 to 1926; member of the American Dermatological Association; past-president of the Cleveland Dermatological Society; honorary consultant for the U. S. Army Medical Library from 1942 to 1946; during World Wars I and II was on advisory medical boards for selective service; in the Korean War was a member of the board of medical appeals for the northern district of Ohio; member of Phi Beta Kappa, Beta Theta Pi, Nu Sigma Nu, Alpha Omega Alpha, and Sigma Xi fraternities; at various times on the staffs of St. Alexis, City, St. John's, and St. Vincent Charity hospitals; contributor to "Blakiston's New Gould Medical Dictionary" in 1949; author of "A Manual of Clinical Laboratory Methods"; died in the Hanna House, University Hospital June 7, aged 76, of adenocarcinoma of the kidney.

Davis, Walter William Ⓜ Los Angeles; Meharry Medical College, Nashville, Tenn., 1935; certified by the National Board of Medical Examiners; served on the staffs of Methodist Hospital of Southern California, Queen of Angels Hospital, and Temple Hospital; died June 8, aged 48, of acute myocardial infarction.

Dietzel, Marie P. Delalondre, Galveston, Texas; University of Texas School of Medicine, Galveston, 1897; died in the John Sealy Hospital June 6, aged 79, of mesenteric thrombosis and atherosclerosis.

Draper, Willard Jesse Ⓜ Heber, Utah; Northwestern University Medical School, Chicago, 1948; member of the American Academy of General Practice; on the county school board; city health officer; co-owner of Heber Hospital; died June 4, aged 37, of an accidental gunshot wound.

Driscoll, Jerome James, Danbury, Conn.; University of Vermont College of Medicine, Burlington, 1925; died in the Danbury Hospital May 31, aged 57, of subdural hemorrhage due to a skull fracture as the result of a fall.

Eggers, Maynard Woodrow Ⓜ Sioux Falls, S. D.; Northwestern University Medical School, Chicago, 1939; formerly clinical assistant professor of oto-rhino-laryngology, University of South Dakota School of Medical Sciences, Vermillion; died June 9, aged 45, of a stab wound, self-inflicted.

Egloff, William Chauncey Ⓜ Mason City, Iowa; Rush Medical College, Chicago, 1927; served as junior associate in medicine at Harvard Medical School in Boston, where he was research fellow in medicine at Peter Bent Brigham Hospital; veteran of World War II; died near Park Rapids, Minn., May 19, aged 57.

Flagg, Mary B. Fimpel, Vancouver, Wash.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1909; died June 12, aged 77, of arteriosclerosis.

Fletcher, Norton De Los Lull, White Plains, N. Y.; Columbia University College of Physicians and Surgeons, New York City, 1902; served as consulting ophthalmologist at Manhattan Eye, Ear and Throat Hospital; died June 20, aged 81.

Fowler, Arthur, Humphrey, Ark.; University of Arkansas School of Medicine, Little Rock, 1907; member of the Arkansas Medical Society; for many years member and president of the school board; in 1952 the gymnasium at the Humphrey High School was named Fowler Hall in his honor; served as mayor; died in Pine Bluff June 9, aged 77, of metastatic melanoma of the left lung and right chest wall.

Frankel, Jerome Stanley Ⓜ Cleveland; Ohio State University College of Medicine, Columbus, 1941; also a Ph.D.; specialist certified by the American Board of Internal Medicine; member of the American Association for the Advancement of Science, American College of Cardiology, and the American College of Allergists; fellow of the American College of Physicians; veteran of World War II; demonstrator of medicine, Western Reserve University School of Medicine; on the staff of the Mount Sinai Hospital, where he died June 1, aged 45, of lymphosarcoma.

Freidman, Louis Lawrence Ⓜ St. Paul; University of Minnesota Medical School, Minneapolis, 1933; clinical assistant professor of obstetrics and gynecology at his alma mater, where he founded and directed the fertility clinic; specialist certified by the American Board of Obstetrics and Gynecology; founding fellow of the American Academy of Obstetrics and Gynecology; fellow of the American Society for the Study of Sterility; a member of the New York Academy of Sciences; served on the medical staffs of Midway and Miller hospitals in St. Paul and Mount Sinai Hospital in Minneapolis; died June 14, aged 50.

Gardner, Cyrus Bunting Ⓜ Lansing, Mich.; University of Michigan Department of Medicine and Surgery, Ann Arbor, 1904; fellow of the American College of Surgeons; past-president of the state board of registration in medicine; on the staffs of the Edward W. Sparrow Hospital and St. Lawrence Hospital, where he died in June, aged 78, of myocardial infarction.

Gatz, Robert Eugene, Fern Creek, Ky.; Hospital College of Medicine, Louisville, 1906; also a graduate in pharmacy; died June 6, aged 73, of cancer.

Gibbs, James C., Sanford, Fla.; Chicago Homeopathic Medical College, 1886; died June 9, aged 102, of cerebral hemorrhage.

Gordon, Aileen Mary Ⓜ Denver; University of Colorado School of Medicine, Denver, 1951; interned at University of Colorado Medical Center; served a residency at the Veterans Administration Hospital; on the staffs of the Mercy and St. Joseph's hospitals, and St. Luke's Hospital, where she died April 25, aged 47, of subarachnoid hemorrhage.

Gowans, Charles W., St. Louis; Washington University School of Medicine, St. Louis, 1899; died June 17, aged 82.

Graham, Henry Flack, Brooklyn; born in Troy, N. Y., April 20, 1880; Columbia University College of Physicians and Surgeons, New York City, 1905; an associate member of the American Medical Association; member of the founders group of the American Board of Surgery; member of the American Surgical Association; fellow of the American College of Surgeons; past-president of the Brooklyn Surgical Society; member of the board of managers of Methodist Hospital, where he was senior consultant; associated with the Mary Immaculate Hospital in Jamaica, Bay Ridge, Victory Memorial, and Norwegian Lutheran hospitals; died June 21, aged 78, of coronary thrombosis.

Haluszczynska, Wera, Providence, R. I.; Friedrich–Alexanders–Universität Medizinische Fakultät, Erlangen, Bavaria, Germany, 1952; interned at the Jersey City Hospital in Jersey City, N. J., where he served a residency; served a residency at the Lynn (Mass.) Hospital and the Rhode Island Hospital; killed in an automobile accident June 21, aged 37.

Harmon, Vachelle Ernest Ⓜ South Bend, Ind.; born in Lebanon, Ky., Sept. 13, 1885; University of Louisville (Ky.) School of Medicine, 1914; member of the Aero Medical Association; formerly member of the board of education, of which he was secretary-treasurer for four years; veteran of World War I; served in the regular Navy; local medical examiner for the Civil Aeronautics Administration; for many years fire and police surgeon; United Air Lines Examiner; on the staffs of the Northern Indiana Children's Hospital, St. Joseph's Hospital, and Memorial Hospital in South Bend, and St. Joseph's Hospital in Mishawaka; died at his summer home in Diamond Lake, Cassapolis, Mich., June 8, aged 72, of coronary occlusion.

Harris, Stevens Thomas, Albuquerque, N. M.; Southern Medical College, Atlanta, 1894; died May 1, aged 85, of arteriosclerosis.

Higgins, Roy Francis Ⓜ Weston, W. Va.; Georgetown University School of Medicine, Washington, D. C., 1918; served on the faculty of his alma mater; fellow of the American College of Surgeons; member of the Medical Society of the District of Columbia; formerly practiced in Washington, D. C., where he was on the staff of the Providence Hospital; on the staff of the Weston State Hospital; died June 20, aged 65, of coronary thrombosis.

Johnson, Frank Dale Ⓜ Waynetown, Ind.; Northwestern University Medical School, Chicago, 1937; past-president of the Montgomery County Medical Society; a staff member of Culver Hospital in Crawfordsville; died June 2, aged 48, of acute coronary heart disease.

Johnson, Walter Lee, San Gabriel, Calif.; Missouri Medical College, St. Louis, 1897; for many years a staff member of Huntington Memorial Hospital in Pasadena, where he died June 9, aged 88, of ruptured arteriosclerotic aneurysm of abdominal aorta.

Kelly, Martin John, Chicago; Loyola University School of Medicine, Chicago, 1917; died June 18, aged 73, of heart disease.

Keogh, Chester Henry, Chicago; Rush Medical College, Chicago, 1899; died June 18, aged 90, of arteriosclerotic heart disease.

Ketron, Lloyd Warren Ⓜ Baltimore; Johns Hopkins University School of Medicine, Baltimore, 1911; associate professor emeritus of dermatology at his alma mater, where members of the department of dermatology and the Johns Hopkins Hospital established an annual lecture in his name, the first of which was given this year; specialist certified by the American Board of Dermatology and Syphilology; member of the American Dermatological Association, Society for Investigative Dermatology, and the American Academy of Dermatology and Syphilology; on the staff of the Johns Hopkins Hospital, where he died June 7, aged 73, of arteriosclerotic heart disease, refractory anemia, and pulmonary edema.

Knouf, Clare Elden Ⓜ Iowa City, Iowa; State University of Iowa College of Medicine, Iowa City, 1944; veteran of World War II; member of the American Academy of General Practice and the Iowa Heart Association; resident, department of medicine, Veterans Administration Hospital; hanged himself June 3, aged 39.

Koons, Ruth Alice Ⓜ Columbus, Ohio; Ohio State University College of Medicine, Columbus, 1930; clinical assistant professor of medicine at his alma mater; fellow of the American College of Physicians; on the staffs of the White Cross and Children's hospitals; died in the University Hospital June 9, aged 52.

Leonard, Melville William Ezra, New York City; University of Toronto Faculty of Medicine, Toronto, Ontario, Canada, 1952; interned at Toronto Western Hospital in Toronto, Ontario, Canada; served a residency at the City Hospital in Cleveland and the Metropolitan Hospital in New York City; certified by the National Board of Medical Examiners; on the faculty of the New York Medical College, Flower and Fifth Avenue Hospitals; on the staff of the Metropolitan Hospital; died June 15, aged 34, of coronary disease.

Lewis, Benjamin William Ⓜ Major, U. S. Army, retired, St. Louis; St. Louis University School of Medicine, 1917; received his degree of doctor of public health from Yale University in New Haven, Conn., in 1938; service member of the American Medical Association; entered the medical corps of the U. S. Army in 1918 and retired Dec. 31, 1935, for disability in line of duty; began work with the St. Louis Health Department in 1944 and retired in November, 1956, as chief and physician in the industrial hygiene section; died May 16, aged 65, of coronary occlusion.

Lumsden, Arthur Gomez Ⓜ Petaluma, Calif.; College of Physicians and Surgeons of San Francisco, 1906; served as health officer and secretary of the board of health; on the staff of the Petaluma General Hospital, where he died May 1, aged 75, of coronary disease.

Lyman, Timothy, Sacramento, Calif.; Stanford University School of Medicine, San Francisco, 1915; an associate member of the American Medical Association; veteran of World War I; served on the staff of the Sacramento Hospital; died June 6, aged 75, of heart disease.

Manske, Gerhard Rudolph Ⓜ Texas City, Texas; University of Texas School of Medicine, Galveston, 1932; fellow of the American College of Surgeons; veteran of World War II; associated with the Galveston County Memorial Hospital in La Marque, St. Mary's Infirmary in Galveston, and the Danforth Memorial Hospital; partner of the Beeler–Manske Clinic; charter member and past-president of the Beeler–Manske Clinic; died June 4, aged 52, of coronary occlusion.

Mares, Charles Francis Jr. Ⓜ Galveston, Texas; University of Tennessee College of Medicine, Memphis, 1928; fellow of the American College of Surgeons; served on the faculty of the University of Texas School of Medicine; county physician; on the staff of St. Mary's Infirmary, where he died June 2, aged 58, of acute myocardial infarction.

Mayfield, Carey Boyd, Sesser, Ill.; National University of Arts and Sciences Medical Department, St. Louis, 1912; died April 28, aged 72, of aspiration pneumonia and duodenal ulcer.

Newton, Ralph George Ⓜ Macon, Ga.; Emory University School of Medicine, Atlanta, 1924; member of the Southeastern Surgical Congress; fellow of the American College of Surgeons; past-president of the Bibb County Medical Society; served as president of the staffs of Macon and Parkview hospitals; died June 5, aged 60, of coronary occlusion.

Newton, William Curtis, San Diego, Calif.; Boston University School of Medicine, 1896; an associate member of the American Medical Association; veteran of World War I; formerly practiced in Revere, Mass.; died June 6, aged 84, of arteriosclerotic heart disease.

Platt, Paul Campbell Ⓜ Kansas City, Mo.; University of Nebraska College of Medicine, Omaha, 1932; veteran of World War II; on the staffs of the Research and St. Joseph's hospitals; died June 6, aged 53, of coronary occlusion.

Von Der Lieth, Harold Otto, San Francisco; Cooper Medical College, San Francisco, 1897; an associate member of the American Medical Association; served on the staff of Franklin Hospital; veteran of World War I; died in Berkeley, June 7, aged 82, of myocarditis and arteriosclerosis.

Washam, William Worth, Cornelius, N. C.; North Carolina Medical College, Davidson, 1901; on the staff of the Lowrance Hospital in Mooresville, where he died June 2, aged 87, of cardiac fibrillation.

Whitmer, Charles F., Colton, Calif.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1898; formerly practiced in East St. Louis, Ill.; a member of the school board when the Colton Union High School district was originally formed and was honored at the dedication of the Charles F. Whitmer Auditorium which stands on the high school grounds; past-president of the Colton Rotary Club; died in the Southern Pacific Hospital, San Francisco, Jan. 1, aged 87, of bronchopneumonia.

Williams, Rodman H., Chaplin, Ky.; University of Louisville (Ky.) Medical Department, 1903; veteran of World War I; died June 8, aged 80, of coronary thrombosis.

Wyatt, James Odis Ⓜ Amarillo, Texas; Meharry Medical College, Nashville, Tenn., 1931; medical superintendent and owner of the M. L. Wyatt Memorial Hospital; died June 3, aged 51, of myocardial infarction and hypertension.

FOREIGN LETTERS

AUSTRIA

Operation for Aortic Stenosis.—At the meeting of the Society of Physicians in Vienna on June 13 Dr. W. Lorbeck reported a series of 20 patients operated on for stenosis of the aortic isthmus. Of these four died postoperatively and in one it was found that the condition was not surgically correctable. The remaining 15 were relieved of their symptoms. The most favorable time for operation was between the 10th and the 20th year of life. Advancing loss of elasticity in the aortic wall leads to disruption of the wound. Dr. F. Kaindl said that selective catheter aortography in combination with the determination of the blood pressure within and above the stenosis was the diagnostic method of choice.

UNITED KINGDOM

Serum Transaminase in Hepatic Disease.—Pryse-Davies and Wilkinson (*Lancet* 1:1249, 1958) carried out more than 1,000 determinations of serum glutamic oxalacetic transaminase (S. G. O. T.) and glutamic pyruvic transaminase (S. G. P. T.) in patients with hepatic and gastrointestinal diseases and in controls. An improved spectrophotometric method was devised, in which the transaminase system was coupled with a second enzymic reaction involving the oxidation of the reduced form of diphosphopyridine nucleotide. It was found that the two transaminases were different entities with different electrophoretic mobilities. They could be separated by paper electrophoresis and acted on different aminoacids. From a study of the serum S. G. O. T. and S. G. P. T. of 157 control subjects it was concluded that values exceeding 40 and 30 units per milliliter respectively are abnormal. The serum S. G. O. T. and S. G. P. T. in patients with a wide range of hepatic diseases were examined. High levels of S. G. O. T. activity (sometimes 2,000 units per milliliter) were observed in patients with acute infectious hepatitis, the highest figures being obtained at the onset of jaundice. The S. G. P. T. was also raised, although not so much. Moderately raised values (100 to 300 units per milliliter) of both enzymes were found in patients with obstructive jaundice, hepatitis due to glandular fever, and toxic hepatitis due to hepatic poisons. Variable results were obtained in patients with cirrhosis and liver metastases; in 64% the S. G. O. T. was raised above normal values, whereas only about 40% showed increased S. G. P. T. activity.

In 35 patients with miscellaneous disease of the gastrointestinal tract not involving the liver, normal values were recorded. The S. G. O. T. showed a moderate and transient rise, up to 300 units per milliliter in patients with myocardial infarction, but in this condition the S. G. P. T. was usually normal. The authors believe that S. G. P. T. and S. G. O. T. determinations are of diagnostic value in hepatic disease, particularly if interpreted critically in conjunction with other liver function tests.

Neonatal Tetanus.—Tompkins reported a high incidence of neonatal tetanus in Nigeria, where the cord is cut at birth with an unsterile stick or palm leaf and dressed with a variety of unsterile materials, including cow dung (*Brit. M. J.* 1:1382, 1958). In three years 141 patients with neonatal tetanus were treated at University College Hospital, Ibadan, with a mortality of 90%. The incidence of the disease was higher in the dry season than in the wet, probably because of the greater amount of dust. The length of the incubation period was closely related to the mortality, the mean incubation period of the survivors being 10.7 days and that of patients of the fatal cases 7.3 days. Mortality was also related to the interval between the failure of the infant to nurse, which was usually the first symptom, and the onset of tetanic spasms. The mortality was much higher if this period was less than 24 hours. The severity of the disease on admission was a useful, although not infallible, guide to the prognosis, the mortality being greater among those graded as severe.

No correlation was found between mortality and the dose of antitoxin, although there was a significantly longer survival time among those patients who received a dose of more than 20,000 units and who subsequently survived than among those who received less. Increasing the dose of antitoxin to 70,000 units did not lead to any further increase in survival time. It was therefore concluded that 50,000 units is sufficient. Sedation is an essential part of treatment, although Tompkins did not find that any one sedative was superior to any other. Sedation must be kept as light as possible to control spasms without depressing respiration. Feeding difficulties and respiratory complications in these infants were circumvented by withholding food by mouth and maintaining hydration and electrolyte

The items in these letters are contributed by regular correspondents in the various foreign countries.

balance parenterally. Respiratory complications accounted for a number of deaths, some of which could have been prevented by tracheotomy.

Expectorants.—In the evaluation of expectorants many workers have studied their effect on the volume or weight of output of respiratory tract secretion, but Hillis and Stein (*Scottish M. J.* 3:252, 1958), stated that the effect on viscosity is more important than volume, because the ease with which sputum flows depends on its viscosity. Using a decrease in viscosity as an index of expectorant activity they examined several drugs used in cough medicines as expectorants. The sputum of patients with chronic bronchitis was collected over a five-day period, measured, and homogenized with sodium hydroxide solution, and its viscosity was index-measured by the time of fall in a capillary tube viscosimeter. The effect of potassium iodide, ammonium chloride, ipecacuanha, and a placebo on the volume and viscosity of sputum was then examined. The subjects tested served as their own controls. None of the drugs had any significant effect on the viscosity of the sputum, and only potassium iodide caused a significant increase in output.

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Alcohol and Driving.—Alcohol as a cause of car accidents has been widely studied. Most of the investigations have been concerned with an examination of the effect of alcohol on reaction time and driving skill rather than on judgment and the assessment of risks while driving. Cohen and coworkers (*Brit. M. J.* 1:1348, 1958) believing that the latter is as important as driving skill as a factor in road accidents, carried out an investigation on Manchester bus drivers in their driving school to examine the effect of alcohol on road judgment and risk taking. After working an eight-hour shift the men had a meal and one to one and a half hours later were given either 2 oz. of Scotch whisky, containing 23 ml. of absolute alcohol, or three times this amount. The driver's task was to estimate how successful he would be in driving his bus between gaps of varying width marked by movable white posts. He was first asked if he thought he could do it, then he attempted to drive the bus through the gap. His performance was measured at different sizes of gap. It was found that drivers who took alcohol became involved in greater hazards than those who did not. As they consumed more alcohol their performance as well as their judgment progressively deteriorated, they were involved in greater hazards, and they displayed a false confidence in their driving abilities. Alcohol intensified any driver's tendency to overrate his ability in relation to his performance. Even small amounts of alcohol affected judgment and risk taking. The authors suggested that to reduce road accidents it should be an offense to take alcohol within a specified time before driving a car. Less than 0.5% of car accidents are attributed to alcohol by the police, but this is considered a gross underestimate, as they only prosecute in cases where the driver is obviously drunk.

Walls (*Brit. M. J.* 1:1442, 1958) examined the urine-alcohol concentrations of 312 persons arrested and charged with driving under the influence of alcohol. The figures were mostly distributed around a mean value of 300 mg. per 100 ml., which corresponds to a blood alcohol concentration of 230 mg. per 100 ml. According to Walls the decisions of the courts on driving offenses, in which the accused is charged with drunkenness, are not influenced at all by the legal evidence of urine-alcohol concentrations.

Medication and Anesthesia.—Dundee (*Brit. M. J.* 1:1433, 1958) called attention to the extent to which some drugs may influence the response of patients to anesthesitization. The side-effects of drugs taken for therapeutic purposes cannot always be predicted with certainty by pharmacologists, and sometimes they are only detected by chance many years after the preparation has been introduced. They may occur on the operating table or in the immediate postoperative period. Thus therapeutic agents whose main effect is to decrease vascular tone, such as the ganglionic blocking drugs or chlorpromazine, if given before an anesthetic, increases the hypotensive effect of narcotics, and severe and even fatal collapse may follow their administration before a normal dose of anesthetic. This applies particularly to the barbiturates given intravenously. Their hypotensive action is difficult to predict in certain patients. If they are given to patients receiving ganglionic blocking agents, the fall in blood pressure may be disastrous. Patients receiving other hypotensive agents such as the rauwolfia or veratrum alkaloids or mecamylamine may also react to anesthetics with a sudden and rapid fall in blood pressure. The phenothiazine derivatives used to control the tremor of paralysis agitans, such as caramiphen, and also some of the tranquilizers, prolong the narcotic action of anesthetics. They possess to a greater or lesser extent the same hazards as chlorpromazine. Such drugs also influence the effect of muscle relaxants. A dangerous degree of respiratory depression can result from the combination of analgesic drugs and the intravenously given barbiturates. A similar result can occur when cyclopropane is administered to patients who have had deep x-ray therapy to the head and neck.

Induced adrenocortical insufficiency, after the prolonged use of cortisone, its analogues, and corticotropin, makes patients sensitive to the stress of anesthesia and surgery. Prolonged severe hypotension, respiratory depression, and delayed recov-

ery may follow operations on such patients. Catastrophes can be prevented by increasing the dose of steroid preoperatively, and if they do occur they respond to intravenously given hydrocortisone. Steroid-induced primary pituitary failure may persist for several months after therapy with the drugs is stopped. Dundee emphasized that during the preoperative period all patients should be questioned regarding steroid therapy. The hazards of inducing anesthesia in patients with a full stomach are now appreciated, and for this reason Dundee deprecated the preoperative preparation of diabetics with glucose by mouth. Other hazards that he encountered were the incompatability of oxytocin injection with light cyclopropane anesthesia, and the possibility of citrate intoxication, associated with an increase in venous pressure and the gradual onset of cardiac failure, as a cause of cardiovascular collapse after massive transfusion of stored blood.

John Snow Centenary.—The centenary of the death of John Snow, pioneer anesthesiologist, was celebrated in London in June by the laying of wreaths on his grave at Brompton Cemetery in London by the president and members of council of the Association of Anesthetists of Great Britain and Ireland, the dean of the Faculty of Anesthetists of the Royal College of Surgeons of England, and the presidents of the sections of anesthetics and epidemiology of the Royal Society of Medicine. John Snow administered chloroform to Queen Victoria in 1853 for the birth of Prince Leopold. Besides writing his classic work on the administration of chloroform and ether, he proved the water-borne spread of cholera in the epidemics of the disease that plagued London in his time.

Diamond Jubilee of Medical Corps.—The Royal Army Medical Corps celebrated its diamond jubilee this year. On June 23, 1898, Queen Victoria, who was then 80, granted it a royal warrant. At the time William Leishman, whose name is commemorated in the tropical disease leishmaniasis, was a young medical officer in the new Royal Army Medical Corps. He later became Lieutenant-General Sir William Leishman, Medical Director-General of the Army Medical Service, and professor of pathology of the Royal Army Medical College. Major-General Sir David Bruce, whose greatest contributions to medicine were his work in Uganda on sleeping sickness and undulant fever, which was subsequently named brucellosis after him, became commandant of the Royal Army Medical Corps College.

Drug Addiction.—There are 359 known drug addicts in Great Britain, according to the British government's report to the United Nations on narcotic drugs. Of these 70 are physicians, 15 are nurses, 2 are dentists, and one is a pharmacist. Female addicts outnumber male addicts by 11. The total number of 359 is an increase of 84 over the figure for the previous year. The commonest drug of addiction is morphine, with 149 addicts, followed by meperidine hydrochloride with 74, and heroin with 52. In the last year 95 prosecutions were brought for violation of the narcotic laws, and 90 of those prosecuted were convicted. There were 14 seizures of opium, the total amount weighing 5.3 kg., compared with 29, weighing 54.2 kg., in the previous year. More cannabis (marihuana), used mainly by Asians, Africans, and West Indians, was seized than in the previous year. There were 51 convictions for its unlawful possession, about 60% of the offenses occurring in London.

Public Blamed for High Drug Bill.—In a report of the committee appointed to investigate the cost of prescribing drugs under the National Health Service the public is blamed by implication, rather than the physician, for the big rise in the national drug bill. The committee, composed largely of physicians, was presided over by Sir Henry Hinchcliffe, a banker. In the last 10 years the cost of prescribing drugs has more than doubled. In 1949, the first full year of the health service, there were 202 million prescriptions, and last year there were 207 million. The increased cost is thus due to the cost of drugs and their compounding by the pharmacist, rather than to any great increase in the number of prescriptions issued. The cost has risen from $85,000,000 to $170,500,000, with a cost of 82 cents per prescription. The Hinchcliffe committee says that so far it has found no evidence of serious irresponsibility on the part of physicians in prescribing. The increase in drug cost was less than in other countries in Europe and the British Commonwealth with insurance systems.

The committee recommended (1) the production of a comprehensive prescription handbook, drawing the attention of medical schools to the National Formulary; (2) indication on the leaflets issued to physicians of the price of drugs; and (3) circulation to physicians of up-to-date prescribing statistics. It was suggested that before a new drug is put on the market it be given an approved name which should appear in advertising matter and on the drug package as prominently as the trade name. The report says that about 700 physicians, whose prescribing costs are much higher than the average, are visited each year. The president of the Association of the British Pharmaceutical Industry criticized the report on the grounds that it is a misconception that standard drugs are cheap and that proprietary preparations are not. Often proprietary preparations are actually cheaper. He also pointed out that vast sums are spent by the pharmaceutical industry on research and that the manufacturer can only recover the cost of research on a new drug by selling it under a proprietary name.

CORRESPONDENCE

WEIGHT REDUCTION

To the Editor:—In the Correspondence section of THE JOURNAL (**166**:2214 [April 26] 1958), Dr. A. R. Feinstein comes to the defense of the low-calorie, low-protein formula diet as used for weight reduction at the Rockefeller Institute. The diet contains 22 Gm. of protein, 52 Gm. of fat, 85 Gm. of carbohydrate and has a value of 896 calories (Feinstein and others, *Ann. Int. Med.* **48**:330-343 [Feb.] 1958). No studies of nitrogen balance were made. Jolliffe (*J. A. M. A.* **161**:1633-1636 [Aug. 25] 1956) showed most cogently that a decided negative nitrogen balance exists in obese individuals who are on such diets.

There is an important phase of this subject, namely, the caloric equivalent of body weight lost, which has not been explored at all by workers in this field. While fat can be stored in an almost pure state in the body, protein cannot be stored dry but retains with it three or more parts of water. Thus 1 Gm. of adipose tissue has a value of approximately 8 calories, while 1 Gm. of flesh has approximately a value of 1 calorie. In clinical weight reduction, when the patient is in nitrogen equilibrium, the caloric deficit is made up by the catabolism of fat. The caloric equivalent of 1 lb. of body weight lost is, under the circumstances, about 3,500 calories. In the Rockefeller formula diet, where a negative nitrogen balance is present, the caloric deficit is made up by the catabolism of fat and protein, and the caloric equivalent of 1 lb. of body weight lost is decidedly less. The proof of this is strikingly demonstrated in Benedict's study of the professional faster Levanzin (Benedict, F. G.: Study of Prolonged Fasting, publication 203, Carnegie Institution of Washington, 1915). Levanzin fasted for 31 days, during which time he lost 30 lb. Of the weight lost, 18.3 lb. (8319 Gm.) was flesh, of which 14 lb. (6,383 cc.) was water, and 3.7 lb. (1,664 Gm.) was protein with a value of 6,828 calories. If Levanzin had been in nitrogen equilibrium, the 6,828 calories would have been derived from adipose tissue with a loss of only 1.82 lb. of weight. The caloric equivalent of 1 lb. of body weight lost by Levanzin was 1,500 calories.

Feinstein further states: "In the outpatient studies, the percentages of weight loss in the formula-fed group were much higher than those obtained with many conventional diet programs." These two groups are not at all comparable. In the conventional groups the patient is in nitrogen equilibrium, and the caloric equivalent of 1 lb. of body weight lost is 3,500 calories. In the Rockefeller group, where a nitrogen deficit was present, considerable losses of water occurred, and the caloric equivalent of 1 lb. of body weight lost was decidedly less than 3,500 calories.

Most important of all is the fact that a considerable part of the weight loss which occurs when a negative nitrogen balance is present is spurious because it has no permanency. After the desired weight loss has occurred and the patient has been put on a diet adequate to maintain caloric equilibrium, the protein stores which have been depleted during the period of negative nitrogen balance will be replenished. For every pound of protein (1,850 calories) replenished, there will be retained 3 lb. of water, making for an increase of 4 lb. in body weight. Thus, even though the patient is in caloric equilibrium, he will continue to gain weight until the protein stores have been completely restored. If there have been large losses of protein, the gain in weight will be very large indeed. The conclusion can be drawn that a basic desideratum in the dietary management of obesity is the maintenance of nitrogen equilibrium.

MAX WISHNOFSKY, M.D.
615 Williams Ave.
Brooklyn 7, N. Y.

FETAL AND MATERNAL LOSS

To the Editor:—A paper on infant mortality by Verhoestraete and Puffer appeared in THE JOURNAL (**167**:950-959 [June 21] 1953). Some six years of work for the World Health Organization and the United Nations Children's Fund in rural China and northeastern Brazil gradually forced upon me a conviction that in so-called underdeveloped countries (i. e., countries with few machines and little money but many people), the quickest, simplest, and easiest approach to reduction of sickness and death at childbirth is by training rural midwives. One teaches them simply and practically to do a few things—the main ones being to (1) recognize easily perceptible anomalies of pregnancy early and, if possible, send women with such anomalies to a doctor before labor begins; (2) scrub their own hands with soap and hot, boiled, running water, poured from a tin can or kettle; (3) under no circumstances insert their fingers into the parturient's vagina; (4) use simple means of inducing respiration in apnëic newborn infant; and (5) keep the newborn infant, especially his navel, clean.

Experience in Chinese villages taught that thus-trained village midwives reduced deaths from infantile tetanus from 33% to zero by covering babies' navels with sterile gauze instead of plastering them

with cow dung. This minimum may not be irreducible, but then, what is reducible in New York is not necessarily so in the Mexican Sierra Madre.

These training methods embody nothing new; they are ones that during World War II enabled the United States to run a completed Victory ship off the ways in 10 days, using, not skilled shipwrights and fitters, but raw, green laborers, who carried out only a few technical maneuvers, but these repeatedly and all day long.

LEO ELOESSER
Apto. Post. 39
Tacámbaro, Michoacan, Mexico.

JOURNAL ARTICLE

To the Editor:—The undersigned greatly regret the omission of a crucial acknowledgment in their article, "Acute Blood Loss Requiring Fifty-eight Transfusions" (*J. A. M. A.* 167:985-986 [June 21] 1958). The patient was not treated in Cleveland Clinic Hospital, as might be inferred from the article. The patient was treated in St. Luke's Hospital, Cleveland, whose staff and facilities deserve full credit. The patient was a private patient of one of the authors (Taylor) and was seen by numerous consultants, one of whom was the senior author (Gardner).

W. JAMES GARDNER, M.D.
HOWARD P. TAYLOR, M.D.
DONALD F. DOHN, M.D.
2020 E. 93rd St.
Cleveland 6.

MISCELLANY

THE FUNCTIONS AND EDUCATION OF MEDICAL RECORD PERSONNEL

The American Association of Medical Record Librarians has acknowledged with gratitude the receipt of the report on "The Functions and Education of Medical Record Personnel" prepared for the Association by the Graduate School of Public Health, University of Pittsburgh, and approved the publication of the report by the University of Pittsburgh Press.

Although the association recognizes certain limitations in the survey relating to the practice of medical record keeping in various parts of the United States and the levels of medical record personnel, it believes the study well defines the basic medical record functions. It should be emphasized, however, that these various functions depend upon the needs of the individual hospital and the policies established by its administration.

Statement of the American Association of Medical Record Librarians on the University of Pittsburgh's study entitled "The Functions and Education of Medical Record Personnel."

One of the major functions assigned the medical record librarian is that of performing a qualitative analysis of the medical record. It is the opinion of the association that this responsibility must be clearly interpreted to mean that, while the medical record librarian is responsible for evaluating the quality of the record itself to insure internal consistency and completeness, this in no way implies a responsibility for evaluating the quality of medical care.

The association wishes to point out that, although it approves the collection of medical statistics as a proper function of the medical record librarian, it believes that the type of compilation should be frequently reevaluated to be certain that the data collected is meaningful and currently useful.

In light of the functions outlined in the report, the association believes that the philosophy of education recommended in the report should be thoroughly tested. It is the opinion of the association that, until such time as experience has clearly demonstrated the superiority of this program as an effective means of meeting the need for qualified personnel, the existing educational program in Medical Record Science should be continued and supported.

To implement the recommendations of the study, the American Association of Medical Record Librarians proposes to utilize its education consultant, education director, and Education and Registration Committee to develop a detailed sample curriculum along the lines proposed to submit to academic institutions interested in establishing medical record science programs. It is suggested that for purposes of evaluation this method of education be tried in a limited number of colleges or universities.

The proposed curriculum, however, varies radically in its approach to teaching medical record science from that currently being used in existing schools. To familiarize directors and instructors with all types of teaching methods and, also, to develop cooperatively more and better teaching materials, the association plans to expand its present program of workshops. It proposes, also, to recommend revision of the Essentials for an Acceptable School for Medical Record Librarians. As they stand, these essentials not only preclude the curriculum recommended by this study but they also conflict with the academic requirements of those colleges and universities which at the present time are affiliated with medical record librarian schools.

The association appreciates that the proposals so far discussed are long range in nature and cannot immediately meet the acute shortage of trained medical record personnel. Accordingly, it proposes an accelerated in-service training program for medical record personnel which will improve the skill of untrained workers but will in no way produce professional medical record librarians.

MEDICAL LITERATURE ABSTRACTS

PEDIATRICS

Intramedullary Transfusions in the Newborn Infant. S. Folena. Presse méd. **66**:641-642 (April 12) 1958 (In French) [Paris].

Transfusions cannot always be given readily to the newborn infant by the intravenous route. Attempts to overcome this difficulty have led to the use of transosseous (intrafemoral and intrailiac) routes. The first or intrafemoral approach has proved especially valuable when transfusions are to be given to the premature infant. The second or intrailiac route, advocated by the author since 1945, seems to be more useful in the full-term newborn infant and in nurslings. Numerous investigations have shown that intrailiac transfusions are entirely comparable to those given intravenously. Not only can they be given without danger, but they also offer several advantages, notably ease of execution and an almost complete absence of the phenomena of shock.

Intrailiac transfusions must be given with a special needle, which has been devised by the author and which is quite similar to a trocar for sternal puncture. Its dimensions, for the newborn infant, should be 2 cm. in length and 1 mm. in diameter; it should be provided with a mandrel; and it must be sterilizable in a sterilizer. The puncture should be made in the bone 1.5 cm. behind the anterior-superior iliac spine and about 1 cm. below the superior margin of the iliac crest. The spongiosa in this region in newborn infants born at term is very abundant, and the cortex of the bone is especially thin, making it easy to penetrate the medullary cavity with the use of a light local anesthetic (ethyl chloride or, more simply, ether). Entrance into the medullary cavity of the iliac crest is virtually entrance into the venous system: hence, it provides a route for transfusion which is especially suited to use in the neonatal period.

Several infants with hemolytic disease have been successfully treated by this method. Blood was withdrawn, in infants needing exchange transfusions, from the radial artery while Rh-compatible blood was being given by the intrailiac route. Others, again, received only direct intramedullary transfusions (from the vein of the donor to the bone marrow of the infant, which the author considers preferable to the use of citrated blood). The following are the 3 other most important conditions in which the intrailiac route has been used to good effect: diarrhea of the newborn infant; sclerema, whose formerly high mortality has been enormously reduced by the practice of giving 1 or more intrailiac transfusions of compatible blood, as soon as the diagnosis has been made; and hemorrhagic disease. The advantages of this method of administering transfusions to the newborn infant are so great that it should be made known to all practitioners.

The Role of a Chronic Carrier in an Epidemic of Staphylococcal Disease in a Newborn Nursery. R. T. Smith. A. M. A. J. Dis. Child. **95**:461-468 (May) 1958 [Chicago].

During the summer of 1956 an alarming number of infections in newborn infants and their mothers, both in the hospital and after discharge, occurred at a large general hospital in Minneapolis. Some of these infections were considered serious, but the majority were minor infections with serious potentialities. The hospital records of all newborn infants admitted to the nursery after May 1, 1956, were reviewed to determine the incidence of various infections in the nursery before the start of the epidemiologic studies. Physicians on the hospital staff who had delivered infants during the period were contacted to determine the incidence of infection in mothers and their infants up to 6 weeks after discharge. From the beginning of the investigation, all coagulase-positive staphylococci isolated were saved for bacteriophage typing. Staphylococcic infections developed in 117 of 981 infants, and breast abscesses developed in 24 mothers. In at least 3 families in which the mother or the infant had a clinical infection, staphylococcic disease also developed in another member or members of the family. Pyoderma, furunculosis, paronychia, sinusitis, and otitis media occurred in the siblings or in the fathers.

The highly virulent "epidemic" strain of staphylococcus, 42B/47C/44A/52/80/81, was isolated from a majority of the lesions cultured. The outbreak appears to have been originated and sustained by a chronically infected nurse who carried the epi-

The place of publication of the periodicals appears in brackets preceding each abstract.

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demic strain and worked in both the delivery room and the nursery. Control of the outbreak resulted from removal of this person from the service, without the ancillary use of antibiotics or special skin care. Although tracing an epidemic outbreak to a single infected person, as was done here, may be unusual, this experience gives emphasis to the long-established significance of human infections or chronic carrier states as the prime course of hospital staphylococcic disease. The fact that a chronically infected carrier can be found working in the obstetric service of a modern hospital, unaware of the relationship of her difficulties to those of the nursery, attests to the importance of reeducation of personnel in the principles of aseptic technique and of an administrative policy which encourages reporting illness without fear of economic loss. A policy of giving nurses found to be chronic carriers of the epidemic strain a paid vacation during which they can undergo treatment should prove helpful.

Use of Combined Hormone and Mechlorethamine (Nitrogen Mustard) Therapy in Lipoid Nephrosis. C. D. West. A.M.A. J. Dis. Child. **95**:498-515 (May) 1958 [Chicago].

This study extends previous observations on the combination of hormone and nitrogen mustard therapy in lipid nephrosis. Therapy employing a combination of a hormone and the nitrogen mustard, mechlorethamine hydrochloride, was given on 25 occasions to 12 children with lipid nephrosis. The disease had been present for more than 2½ months at the time that 22 of the courses of combined therapy were given. The effectiveness of the treatment was assessed by comparing the frequency of recurrence of the disease and responsiveness to hormone treatment before combined therapy with the course of the disease after combined therapy. The results strongly suggested that in children with pure lipid nephrosis the addition of mechlorethamine at the end of a course of corticotropin (ACTH), or of a steroid followed by corticotropin, results in 2 advantages, provided that the period of hormone administration prior to the institution of mechlorethamine treatment has been of sufficient duration.

These advantages are as follows: 1. Remission occurs with high frequency when mechlorethamine is given on the last 4 days of a course of hormone lasting 10 or more days. In all of 16 courses of combined therapy given while the disease was active, diuresis occurred coincident with the administration of mechlorethamine. With all except 2 courses, albuminuria likewise cleared. 2. Remission will be of greater duration than that observed after hormone therapy alone, provided that mechlorethamine administration is preceded by a treatment period with a hormone of at least 20 days' duration. Of 15 courses of therapy in which mechlorethamine administration was preceded by 20 or more days of hormone therapy during the previous 30 days, 13 were followed by a remission significantly longer than was observed with hormone therapy alone. The hormone used was either corticotropin or a steroid followed by corticotropin. Long remissions resulted whether, at the time of mechlorethamine administration, the disease was active, with albuminuria present, or in remission. Of 4 courses of therapy in which mechlorethamine administration was preceded by 15 to 17 days of corticotropin administration during the previous 30 days, 2 courses were followed by a long remission, and 2 appeared to have little influence on the course of the disease. Of 4 courses in which mechlorethamine administration was preceded by only 6 continuous days of corticotropin therapy, 3 failed to affect the duration of the subsequent remission, and 1 had a questionably salutary effect. It is felt that with the modified form of combined therapy now in use (long-term pretreatment with steroid followed by corticotropin) these results may be improved.

True Hermaphroditism: Report of a Case. W. Hughes, C. C. Erickson and W. Fleischmann. J. Pediat. **52**:662-669 (May) 1958 [St. Louis].

The authors report a case of true hermaphroditism in a 15-year-old boy in whom at the time of birth it was noted that the external sex organs were ambiguous. Since they resembled those of a male more than those of a female, the infant was reared as a male. During his 13th year bilateral enlargement of the breast was noted, which continued to a size that caused him embarrassment. On physical examination, mammary ducts were palpated, radiating from the nipples of the breasts which were the size of those of an 18-year-old girl. A small amount of axillary hair was present. Pubic hair was present but did not extend onto the abdominal wall to a level that would permit the classification of male distribution. The phallus was 4 cm. in length, with a well-defined glans and a perineal hypospadias. A firm movable mass, 2 cm. in diameter, was palpable near the external inguinal ring in the right scrotal sac which resembled the labium majus. A defect in the left inguinal ring permitted a small herniation, but no gonad could be palpated in the left labium. No prostate or cervix could be palpated through the rectum. At endoscopy the apparent urinary meatus in the perineum was found to be a common channel, and about 2 cm. from the external orifice, there was a urethral orifice leading into a normal bladder. The channel extended posteriorly and superiorly into a blind pouch interpreted as a vagina. A biopsy section was removed from the labial mass, and miscroscopic examination identified the structure to be atrophic testicular tissue. Adjacent to the testicular mass in the right labium was a smaller elongated structure; histological study of the second mass proved this to be epididymis of

essentially normal architecture. The hernial sac on the left side was opened, and the adjacent peritoneal cavity was explored with a finger. A small round mass was outlined, but its identity could not be established.

An exploratory laparotomy was performed and revealed a hypoplastic uterus, a grossly normal left fallopian tube, and a cystic ovary in the left adnexa, all of which were removed. Skin specimens from various portions of the body each revealed a male chromosomal pattern. Two months after the hysterectomy, a bilateral mammilliplasty was performed. Over an 8-month period, a 3-stage repair of the hypospadias was undertaken, producing a penile urethra. The vaginal cavity was not removed. No hormone therapy was deemed necessary. With testis on one side and ovary on the other, the case of the patient was classified as the lateral or alternating type, according to Hinman's simplified grouping of 3 types of true hermaphroditism. One can assume that serious psychological complications were avoided through rearing this patient consistently as a boy, leaving no doubt as to his assignment to the male sex. When his breasts started to enlarge, his gender role was already firmly imprinted.

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Management of Bronchial Asthma in Children. L. Unger, A. A. Wolf, J. H. Johnson and D. L. Unger. J. Pediat. **52**:538-546 (May) 1958 [St. Louis].

True bronchial asthma is an allergic condition which is usually preceded or associated with seasonal or perennial rhinitis and with partial obstruction of the lower air passages. Bronchial asthma is characterized by wheezing, dyspnea, orthopnea, and cough. Demonstration of the causative allergens, especially in patients in whom asthma has begun after the age of 40 years, is not always possible; in children, however, the discovery of the allergen is almost always a comparatively simple matter. For example, in 1952, positive skin tests were obtained in 362 of 366 asthmatic children. A good history must concern itself not only with possible allergic factors but also with past illnesses, emotional problems, and details relating to previous immunizations. The physical examination must be thorough, with special attention to the lungs and heart as well as to the nasal passages. A complete blood count should be made in each case, as well as a Kahn test, a nasal smear, urinalysis, and determination of the erythrocyte sedimentation rate. Skin tests are indicated in almost all allergic conditions, but they are generally useless in urticaria and migraine. Tests may be negative in asthmatic infants and positive in the same children when repeated a few years later. Tests should be made with all possible inhalant materials and also with the foods the child eats. A proper allergy survey cannot always be made by performing 20 to 30 skin tests; in many children this number is insufficient, and the results will not be satisfactory. Tests should be made by the scratch method, but intradermal tests must follow if the scratch method does not yield adequate information. Physicians who perform only scratch tests can expect not more than 75% results; those who make only intradermal tests are also wrong, because (*a*) they are apt to bring on systemic reactions which may even be fatal, (*b*) they perform fewer tests and may therefore miss positive skin tests, and (*c*) intradermal tests are more painful.

Therapy may be specific, symptomatic, or preventive. The specific management of asthmatic children consists in avoidance of causative allergens, with or without hyposensitization; usually the results are good. Symptomatic therapy of bronchial asthma is nonspecific, and nothing more than temporary relief of symptoms can be expected. Reassurance is the most important single measure, especially if the child is having his first severe attack. For mild to moderate symptoms, repeated subcutaneous injections of 1:1,000 epinephrine in doses of 0.10 to 0.20 cc. usually suffice, along with 5 to 10 drops of a saturated solution of potassium iodide. If necessary, a mild sedative may be added, e. g., elixir of Benadryl. This combination is almost always effective. For more severe asthma, the epinephrine may be injected every 4 hours; often 0.10 cc. of Sus-Phrine, a long-acting epinephrine suspension, is added. Instillation of 5 grains of aminophylline rectally is helpful and is to be preferred to the use of aminophylline suppositories. In addition, sirup of ipecac will induce vomiting, and as the child vomits, he usually eliminates sputum which he has not yet learned to cough up. For the most severe cases (status asthmaticus), antibiotics, e. g., penicillin, should usually be added, because in almost all such cases there are infectious complications which cause the symptoms to continue. Corticotropin-gel and prednisone have become very important, but cortisone itself is rarely used any more. The corticosteroids are of great help in lessening asthmatic symptoms, but they are not without danger, and they do not cure asthma or any other disease.

Much can be done to prevent the development of allergic symptoms in children, especially children of allergic parents. The homes should be as free from dust and allergens as possible. New foods should be tried one at a time, at least a week apart, to see if symptoms occur. Children with a tendency toward asthma should be guided away from dusty occupations. Exposure to colds should be minimized. Psychosomatic factors, if present, should be given proper attention. If these precautions are carefully followed, the onset of severe asthma in children can be prevented, or, if asthma does occur, the symptoms can easily be controlled.

The Prevention of Bilirubin Encephalopathy. W. J. Waters. J. Pediat. **52**:559-565 (May) 1958 [St. Louis].

Maternal titer values and/or a positive Coombs test by themselves are not an indication for replacement transfusion in hemolytic disease of the newborn due to Rh incompatibility. The main emphasis should be placed on the clinical condition and early course of the newborn infant, particularly the ability to handle bilirubin. A demonstrated rise of serum bilirubin toward critical levels (20 mg. per 100 cc.) early, particularly within 12 hours, remains the best single criterion for the need of replacement transfusion in questionable cases. Close supervision is essential. Clinical judgment, which requires a thorough understanding of the clinical and laboratory data, may indicate the necessity of transfusion in individual cases. Therefore, it is desirable to refer these infants to a medical center if adequate facilities and personnel are not available. The procedure itself is not without hazard, particularly in the hands of unskilled personnel. Replacement transfusions by present methods may be inadequate, in rare instances, to control the serum bilirubin level and prevent brain damage.

Accidental Digitalis Poisoning in Children: Report of a Case and Review of the Literature. C. C. Drevets. J. Pediat. **52**:577-583 (May) 1958 [St. Louis].

Accidental drug poisoning in children is common and is becoming more frequent. Accidental digitalis poisoning, on the other hand, is very rare, especially in children. The present report concerns a 2-year-old boy who ingested about 1.5 mg. of digitoxin shortly after 8 a. m. on the day of admission to the hospital. He began to retch and vomit about noon and became seriously ill quite rapidly thereafter. He was lethargic and vomited repeatedly when examined in the emergency room at about 1 p. m. The heart rate was 96 and the rhythm was somewhat irregular. Serial electrocardiograms showed increasing signs of digitalis intoxication until the intravenous administration of fluids containing potassium was started. Several investigations have been made into the use of potassium in digitalis intoxication. Numerous workers have abolished various arrhythmias with potassium; about half succeeded when the arrhythmias were not due to digitalis, and almost all succeeded when they were due to digitalis. It has been suggested that potassium might inhibit the cardiac effects of digitalis. The intravenous use of potassium-containing fluids is attended with more danger than oral medication, but the persistent vomiting in this patient made intravenous administration necessary. The first infusion, given at a rate of 20 drops a minute, consisted of 500 cc. of 5% dextrose in water with 10 mEq. (750 mg.) of potassium chloride. The pulse rate became less irregular within 3 hours. Intravenous therapy was continued on the second day with 250 cc. of 2.5% dextrose in half-strength lactated Ringer's solution (39 mg. of potassium chloride). Later 250 cc. of 5% dextrose was given in 0.45% isotonic sodium chloride solution.

In this patient the use of an intravenous infusion not only afforded a vehicle in which to administer potassium ions, but it also helped to correct the fluid loss and electrolyte imbalance from the severe vomiting and cessation of fluid intake. It further helped to correct the acidosis of dehydration, which itself may cause potassium loss; and it helped to keep up an adequate urine volume to promote excretion of digitoxin and any excess of potassium which had been administered. Because of the persistent vomiting, the patient was also given 2 injections of 5 mg. of Thorazine 5½ hours apart, with fair results. At the end of the second day, when the child could retain fluids taken by mouth, he was given potassium chloride orally, 125 mg. every 4 hours. After 4 days of treatment no residual signs or symptoms were noted, and the patient was discharged. Although no definite conclusion can be reached concerning the value of potassium therapy, it appeared to have a beneficial effect on this patient, at least on the electrocardiographic signs of digitalis intoxication.

DERMATOLOGY

Hyperglobulinemic Purpura (Waldenström). O. Peterson. Nord. med. **59**:562-563 (April 17) 1958 (In Danish) [Stockholm].

A case of Waldenström's hyperglobulinemic purpura in a girl, aged 15 years, is described. She is apparently the youngest patient with this disease to be reported on. There were pigmentations on the lower extremities after petechias, as well as slight enlargement of the spleen, increased sedimentation reaction, slight anemia, and positive formol-gel and thymol reaction. The electrophoresis curve resembled that in macroglobulinemia, but ultracentrifugation showed that the serum contained component S-7. The disease has a benign course but is of chronic character. No specific therapy is known, and treatment remains symptomatic.

The Senear-Usher Syndrome (Pemphigus Erythematodes): A Report of Eight Cases. V. M. Henington, B. Kennedy and P. R. Loria. South. M. J. **51**:577-585 (May) 1958 [Birmingham, Ala.].

The authors report on 5 men and 3 women, between the ages of 27 and 66 years, with the disease which combines features of benign pemphigus and lupus erythematosus and which has come to be known as the Senear-Usher syndrome. The triad of lesions characteristic of the Senear-Usher syndrome was present in all 8 patients. These were flaccid

bullae, crusting of the scalp suggestive of seborrheic dermatitis or even simulating psoriasis, and lesions of the butterfly area of the face suggestive of lupus erythematosus. It is significant that in 5 patients the lesions first appeared on the scalp. The oral lesions, which were present in a single patient, were apparently not related to the skin condition; they were transient and did not recur during the long duration of the illness. Although the facial lesions in the Senear-Usher syndrome usually consist of hard, infiltrated, scaly plaques that persist for weeks, they may take other forms. Sometimes the lesions have the appearance of seborrheic dermatitis; sometimes they are typical of lupus erythematosus. In the latter case the lesions occupy the butterfly area of the face, are discoid-shaped, and display carpet-tack scales. Unlike the typical lesions of lupus erythematosus, they may appear overnight and may disappear almost as rapidly. In this series the eruptions on the trunk began as small flaccid bullae which ruptured easily and were replaced by raw denuded patches or thick greasy crusts. Greasy crusted lesions occasionally simulated greasy seborrheic keratosis or impetiginous or psoriatic lesions. Blood studies were within normal range, except for an occasional slight anemia in 6 of the patients. Two patients had elevated leukocyte counts when the disease became acute and the bullae were filled with purulent fluid; these 2 patients presented a severe acute type of pemphigus vulgaris during part of their illness. The other 6 patients more properly fell into the pemphigus foliaceus group.

These observations support the general opinion that the Senear-Usher syndrome is a variant of pemphigus, perhaps an abortive pemphigus foliaceus, designated as pemphigus erythematosus. It shows acantholysis, but it does not present a distinct histological picture. Early lesions show acantholytic bullae in the superficial portion of the epidermis, usually in the stratum granulosum or just beneath it. Older lesions show acanthosis, papillomatosis, parakeratosis, and hyperkeratosis. Lesions of pemphigus erythematosus that develop into pemphigus vulgaris show the histological picture of the latter disease. If there is any clinical difficulty in differentiating lupus erythematosus from pemphigus erythematosus, the histological findings, the low leukocyte count, and the studies of the L. E. cells should resolve the problem.

The original outlook on the Senear-Usher syndrome complicated by pemphigus vulgaris has improved greatly since the advent of corticosteroid therapy. The 2 patients with the complication of pemphigus vulgaris and the 6 with the milder type of the disease responded well to treatment with corticotropin in the form of corticotropin-gel and prednisone (Meticorten). The patients were followed for more than 5½ years. Three of them did not require medication for periods varying from 1 to 4 years; the condition of the other 5 is satisfactory on small maintenance doses (20 units of corticotropin given intramuscularly for several weeks and 5 to 15 mg. of prednisone given by mouth daily).

Adrenocortical Dysfunction in the Early Stage of Pemphigus Vulgaris. H. A. Cohen, T. D. Ullmann and A. Dostrovsky. J. Invest. Dermat. **30**:207-210 (April) 1958 [Baltimore].

Disturbances in water and salt metabolism have been described in pemphigus vulgaris, and a dysfunction of the adrenal cortex has been suggested by Talbott and others as the basic disturbance in this disease. More recently, the therapeutic effect of the adrenocorticotropic hormone and of the corticoids has again drawn attention to the possibility of a causal relationship between a disturbance of adrenocortical function and this disease. When the diagnosis of pemphigus vulgaris is made on the basis of the severe local and general manifestations, the disease has already caused such disturbances in the water and salt balance and in the general nutritive state that the adrenal cortical function must necessarily have altered considerably. Thus, a study concerning the possible relationship between underlying endocrinological disturbances and the disease should be based on early cases. The 13 patients with pemphigus in whom the authors examined the adrenocortical function were in the initial stage of the disease, the diagnosis having been confirmed by histological examination. Fourteen patients with skin lesions other than pemphigus served as controls. The tests performed on the pemphigus patients and on the controls were as follows: (1) the salt tolerance test before and after the administration of 10 mg. of desoxycorticosterone acetate; (2) the Robinson, Power, and Kepler test; (3) the 4-hour corticotropin test of Thorn; and (4) the 24-hour urinary excretion of 17-ketosteroids. The patients without pemphigus showed normal results in all the tests. The results in the pemphigus patients as a group were suggestive of the existence of adrenocortical dysfunction.

UROLOGY

Transition of Cystitis Glandularis to Primary Adenocarcinoma of the Bladder. J. L. Shaw, G. J. Gislason and J. E. Imbriglia. J. Urol. **79**:815-822 (May) 1958 [Baltimore].

A 41-year-old woman was hospitalized with the chief complaint of an incisional hernia, dysuria, and cloudy urine. The urinary symptoms dated back 8 years to their first appearance after an abdominal operation for a benign gynecologic complaint. On hospitalization, physical examination showed a very obese woman with an incisional hernia in the mid-

line of her lower abdomen, first-degree cystocele, and 2 plus pedal and pretibial edema. The urine showed many mucus shreds and 30 to 40 red blood cells per high-power field and was loaded with white blood cells. Aerobacter aerogenes and other coliform bacili were cultured. An intravenous urogram revealed good bilateral function with a morphologically normal upper urinary tract, but there was a large filling defect in the right side of the bladder. Cystoscopy revealed a large, broad-based, somewhat elevated tumor mass involving most of the right lateral wall of the bladder. Biopsy of tissue taken from the tumor revealed "polypoid masses lined by adenomatous glands which were mucus secreting in type; the diagnosis was cystitis glandularis (aberrant gastrointestinal tissue)." The tumor was removed by loop resection, and the base fulgurated. Pathological examination corroborated the diagnosis of cystitis glandularis.

When the patient returned to the clinic 22 months later, she complained of frequency, nocturia, and burning on voiding. Cystoscopy revealed a red, velvety mucosa with a mucoid exudate. Eight months later she was admitted to the hospital because of severe pain in her right hip. Cystoscopy and biopsy again showed cystitis glandularis. She returned intermittently during the next 7 months, during which time her bladder symptoms remained unchanged. The patient was then not seen until 5 years and 1 month from the time of the original biopsy and diagnosis of cystitis glandularis. Her complaints were frequency, nocturia, and, now, stress incontinence. Cystoscopy revealed an irregular, nonulcerated, hyperemic tumor involving most of the right lateral wall of the bladder. The clinical impression was that of carcinoma, and the patient was admitted for the 4th time. Transurethral biopsy was compared with previous biopsies and showed that the lesion had undergone malignant change and was a low-grade adenocarcinoma of the urinary bladder. There is a close relationship between cystitis glandularis, one of the common forms of proliferative cystitis, and primary mucus-secreting adenocarcinoma of the bladder. This relationship has been emphasized in the past but only on presumptive evidence based on the high incidence of the coexistence of these lesions and the similarities of theories of pathogenesis. The embryonic rest theory, the anatomic theory, and the theory of the metaplastic transposition of transitional epithelium to a glandular-type epithelium and adenocarcinoma are cited. The latter is the most widely accepted. To the authors' knowledge, this is the first report in which this change was actually observed and demonstrated in a patient. Proliferative cystitis is a premalignant lesion of the bladder, and it is urged that this fact be kept in mind in the clinical management of these forms of cystitis.

Malacoplakia: Review and Description of First Case in Denmark. R. Knoop. Ugesk. læger **120**:498-504 (April 17) 1958 (In Danish) [Copenhagen].

Although malacoplakia resembles chronic cystitis, the characteristic plaque formation, dominating phagocytizing cells, and Michaelis-Gutmann bodies distinguish it from other diseases of the bladder. The case of malacoplakia reported is the 1st to be described in Denmark and apparently the 66th in the literature. The patient was a woman, aged 43 years, with a history of numerous attacks of grave cystitis during a 5-year period. Diagnosis was made by biopsy via cystoscopy. The patient had a healed Boeck's sarcoid in the lungs. Treatment with cortisone, antibiotics, indwelling catheter, and electrocoagulation has led to considerable improvement and possibly recovery. The diagnosis of malacoplakia can be established only by biopsy of tissue from the suspected area and microscopic demonstration of the typical cells and Michaelis-Gutmann bodies. Malacoplakia should be considered particularly in cases of long-continued, intractable cystitis. The prognosis in the individual case is difficult to evaluate. There is apparently a tendency to spontaneous recovery, but the course may be chronic, unaffected by therapy, and finally, often combined with severe chronic infection. In some cases with affected renal tissue, malacoplakia in itself can be fatal, with death from uremia. No etiological factor is known. There is no certain therapy. The disease may perhaps be a special form of Boeck's disease in the urinary tract.

THERAPEUTICS

The Treatment of Malignant Effusions with Radioactive Colloidal Gold (Au^{198}): A Review of Sixty-six Cases. S. H. Seal, S. Crosignani, G. Valvassori and others. Am. J. Obst. & Gynec. **75**:1027-1033 (May) 1958 [St. Louis].

The authors report the results of 4 years' experience with the intracavitary administration of radioactive colloidal gold (Au^{198}) to 66 of 111 patients with malignant growths involving the pleural and peritoneal cavities, whose most important symptoms were due to fluid in the peritoneal or pleural cavities or both and who required frequent taps. Patients with ascites received doses varying from 150 to 225 mc. in the first injection, with an average of 175 mc. Patients who received pleural therapy were given a single dose ranging from 75 to 110 mc., with an average of 85 mc. The radiogold, which was diluted with a volume of 200 to 250 cc. of isotonic sodium chloride solution to ensure a proper distribution of the radioactive material in the cavity, was injected in accordance with the method of Rose and associates.

The palliative results in this study were analyzed in terms of the length of time required for the fluid to reaccumulate in the cavities. Good palliation was observed in 63.6% of the patients (no taps required for a period of at least 2 months after treatment); fair palliation was secured in 21.2% of the patients (no taps required for a period of 1 to 2 months); and no palliation was recorded in 15.1% of the patients (1 tap required less than 1 month after treatment, with reaccumulation of fluid in less than 2 months). No complications due to surgical trauma, local action of the radioactive gold, or infection were observed in any of the patients included in the survey. The usual side-effects of radiation therapy in the form of slight nausea and vomiting during the first 24 to 48 hours after the gold instillation were present in most of the patients. Blood studies performed before and after the treatment did not show any serious bone marrow depression. Approximately 70% of the patients experienced relief from the subjective symptoms. Although radioactive gold has an inhibitive effect on fluid formation, the injections seemed to have no detectable effect on the survival time.

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Use of Phenylbutazone in Pulmonary Tuberculosis. I. De Gennaro and U. Massola. Minerva med. 49:813-818 (March 7) 1958 (In Italian) [Turin, Italy].

Phenylbutazone was administered to 21 patients with pulmonary tuberculosis, in whom relatively high febrile states had persisted despite the previous antibiotic therapy. Acute or subacute exudative type of the disease was present in 11 patients, and the chronic type accompanied by occasional attacks in 10. Phenylbutazone was given orally in daily tablet doses of 200 to 400 mg. before meals for a period ranging from a few days to 40 days. The best drug regimen seemed to consist in administering the drug in 1 or 2 divided daily doses in a few short courses of 5 to 7 days each. An immediate and prolonged improvement of the febrile state in all patients was the most beneficial effect observed even by using small doses of the drug. Amelioration of vegetative functions and a feeling of well-being, accompanied by partial or total remission of toxic symptoms, were also noted. Phenylbutazone was well tolerated by all patients, even in those instances where hemorrhagic episodes occurred. Gastric disorders took place only in severely dyspeptic patients, and this was corrected by decreasing the daily dosage. Hemorrhagic episodes developed in 3 patients, to whom the drug was given in a few short courses of 5 to 7 days with ample drug-free periods in between. Water retention developed in 1 patient. The authors believe that the antipyretic and antitoxic mechanism of phenylbutazone is comparable to that of the adrenals rather than the antipyretic drugs. Phenylbutazone can be used as a useful adjunct to other antituberculous drugs for the treatment of progressive, acute, subacute, or even chronic types of tuberculosis, where a prompt relief of fever is indicated.

Use of Orinase as a Basic Adjuvant in Management of Insulin-Dependent Diabetes. M. Fabrykant. Metabolism 7:213-221 (May) 1958 [New York].

Thirty-eight patients with stable diabetes mellitus and 12 patients with labile diabetes mellitus were given tolbutamide (Orinase) as a supplement to insulin therapy for periods of up to 20 months. Ten of the 38 patients had mild disease and were between the ages of 39 and 75 years at the onset of the disease; 22 patients had moderately severe disease and were between the ages of 34 and 56 years at the onset of their disease; and 6 patients had moderately severe disease and were between the ages of 11½ and 17 years at the onset of their disease. Of the 12 patients with labile disease, 7 were over 20 years of age and 5 were aged less than 20 years at the onset of their disease. Eight of the patients with stable diabetes who had cardiovascular complications and 10 of the patients with labile diabetes were hospitalized when tolbutamide therapy was instituted. Combined tolbutamide-insulin therapy was started with the remaining 32 patients when they were made ambulant. Combined tolbutamide-insulin therapy can be given to nonhospitalized patients with stable and labile diabetes, but initial hospitalization is recommended for patients with cardiovascular disease.

Beneficial effects from combined tolbutamide-insulin therapy, which could not be obtained by administration of insulin alone, were observed in 28 patients with stable diabetes and in 9 patients with labile diabetes. These benefits consisted in a 10 to 70% decrease of insulin requirement in the patients with stable diabetes and in a 10 to 50% decrease in the patients with labile diabetes, an easier regulation and stabilization of the diabetes, and an increased feeling of well-being. Therapeutic failures of this combined therapy were observed in 10 patients with stable diabetes and 3 patients with labile diabetes. Among the 10 patients with stable diabetes were the 6 who were less than 17 years old at the onset of their disease, and the other 4, who were adults at the onset of their disease, had a high insulin requirement of up to 116 units daily. Of the 3 patients with labile disease, 2 plunged into ketosis and required large additional doses of insulin to restore control; the third, a 6-year-old boy, reacted with paradoxical hyperglycemia and increased glycosuria when he was given tolbutamide without decreasing his insulin dose. In some patients with stable mild diabetes, an early favorable response to tolbutamide, which seemed to indicate that it might serve as a complete replacement for insulin, proved to be only temporary

within 2 or 3 months of treatment. In some patients with stable mild diabetes and a high insulin requirement, and in those with labile diabetes, an initial resistance to tolbutamide therapy was followed by a remarkable improvement with its continuous use. In the light of present experience, forecasts of responsiveness based on tolbutamide loading tests or on short-term experiments may be misleading. The use of tolbutamide is an individual experiment in each case. In 6 patients with angina pectoris, a striking relief of anginal complaints coincided with the institution of tolbutamide therapy. These observations suggest a possible relationship between the employment of tolbutamide and the improvement in anginal pain, but corroboration of this relationship must await more extensive and especially designed studies.

PATHOLOGY

Considerations on Changes of the Serum Lactic Dehydrogenase Activity in the Course of Various Pathological States. L. Contro. Minerva med. **49**: 731-733 (Feb. 28) 1958 (In Italian) [Turin, Italy].

The elevation of serum lactic dehydrogenase activity has been observed in association with certain neoplastic and nonneoplastic diseases. The author tested the serum level of lactic dehydrogenase activity of more than 200 unselected hospitalized patients. Relationships between serum levels of lactic dehydrogenase activity and glutamic oxaloacetic transaminase activity in patients with myocardial infarction, as well as between serum levels of lactic dehydrogenase activity and bilirubin activity in patients with acute hepatitis, were also studied. The highest serum lactic dehydrogenase activity levels, in descending order of magnitude, were observed in patients with the following diseases: neoplasms, myocardial infarction, acute hepatitis, and cardiac decompensation. Serum values were within normal limits in patients with chronic liver disease and rheumatic disease. Release of enzyme into the blood stream in neoplastic disease may be caused by cellular lysis, by membranous chemophysical changes, or by changes of metabolic order.

Variations of serum levels of lactic dehydrogenase activity and glutamic oxaloacetic transaminase activity in patients with myocardial infarction were inconsistent during the first 5 to 10 days of disease; in some patients the serum levels of the 2 enzymes reached the peak value and decreased at the same rate throughout the period of observation, whereas in others the lactic dehydrogenase activity level reached its peak value when the glutamic oxaloacetic transaminase activity level was already descending. Correlation between serum levels of lactic dehydrogenase activity and bilirubin activity in patients with acute hepatitis was consistent; the levels increased and decreased at a close rate during the first 45 days of the disease.

The Relationship Between the Clinical and the Histological Features of Acute Glomerular Nephritis: Based on a Study of Renal Biopsy Material. M. S. R. Hutt, J. L. Pinniger and H. E. de Wardener. Quart. J. Med. **27**:265-291 (April) 1958 [Oxford, England].

The authors report on renal biopsy findings in 15 patients with a clinical diagnosis of acute glomerular nephritis and compare the clinical features with the extent of the structural changes observed. Patients whose initial clinical features were similar to those of acute glomerular nephritis, but who were proved subsequently to be suffering from some other disease, were not included. Clinically, 14 of the patients could be divided into 2 groups, depending on the presence or absence of persistent proteinuria (that is, proteinuria each day for the first few days after admission). The 15th patient is considered separately, for, although this 35-year-old man suffered from a typical attack of acute glomerular nephritis with hematuria, hypertension, and cardiac failure, the renal biopsy was not performed until 6 weeks later, when he had recovered completely except for the continued presence of proteinuria. All the patients in this series were alive and symptomless 1 year after their attack of acute glomerular nephritis.

These patients had only minor changes in the epithelium of Bowman's capsule. Clinically, these patients had edema and cardiac failure without proteinuria, hematuria, or hypertension. Eleven patients showed extensive abnormalities in the glomerular tufts. These lesions consisted of varying degrees of nuclear proliferation, infiltration of polymorphonuclear leukocytes, and increase of eosinophilic internuclear material. Six of these patients also had focal areas of severe tubular degeneration and inflammatory cell infiltration of the interstitial tissue. Microscopic lesions of the glomerular tufts were always associated with proteinuria and usually with hematuria; the blood pressure, blood urea level, and creatinine clearance were also related to these structural changes, though not with such consistency. Two patients had severe impairment in the ability to concentrate the urine; both had multiple tubular lesions. An erythrocyte sedimentation rate greater than 55 mm. in 1 hour was associated with widespread renal damage with interstitial and tubular lesions. Only 2 patients had proteinuria for more than a year; in addition to glomerular changes, both had numerous tubular lesions.

QUESTIONS AND ANSWERS

PAIN FROM INTERSTITIALLY APPLIED RADIUM NEEDLES

To the Editor:—*Please suggest treatment for severe pain due to radium needles which were applied interstitially seven months ago for treatment of an epidermoid cancer. The cancer was located on the soft palate of a 70-year-old man. The area around the cancer area is red and inflamed, but the cancer itself is healed. A pathologist reported that clippings from the throat were negative. The patient is able to eat if he dissolves two or three aspirin tablets in his mouth.*

M.D., South Carolina.

Answer.—In this consultant's experience, interstitial application of radium needles to the soft palate has been a very frequent cause of severe pain. Such pain is often associated with impending radiation necrosis in tissue. There is no one specific treatment for this disability. The aspirin treatment described is excellent. In many instances narcotics are required. Copious irrigations with a mild saline solution three or four times a day will be of help. Penicillin injected intramuscularly may help to control or shorten the process. In some cases, surgical excision of the soft palate may give the only relief. Nutrition is exceedingly important under these conditions. A liquid diet, given by way of a soft rubber catheter inserted through the nostril, may obviate some of the discomfort in eating.

ASTHMA AND PNEUMONIA

To the Editor:—*Are asthmatic persons immune to pneumonia? The patients referred to have never coughed, have no Laennec's pearls, but do suffer, complaining that they feel their chests to be as in a vise when they are outside in temperature below 40 F. They are comfortable indoors. They have no coryza and no cardiac symptoms.*

H. Grosby, M.D., St. Louis, Mo.

Answer.—Asthmatic persons are not immune to pneumonia. Asthma is most simply defined as a symptom complex, consisting of shortness of breath with characteristic wheezing associated with interference with the free flow of air through the lumen of the bronchi, usually due to spasm of the bronchial musculature, edema of the bronchial mucosa, and accumulation of thick, tenacious sputum in the lumen of the bronchial tree. Any one of these elements may be present without the other two. Since many conditions may produce this pathological picture, there are many causes of asthma. Among them might be mentioned allergy, infection, tumor, emphysema, endotracheal tuberculosis, and cardiac failure. In young children, bronchiolitis, often with associated collateral pneumonitis, may produce symptoms of asthma. Cough is frequently, but not always or necessarily, associated with asthma. It is usually provoked by the presence of thick tenacious secretions and represents an effort on the part of the patient to expel the material. Components of this bronchial secretion which are often described with the eponyms, Laennec's pearls, Charcot-Leyden Crystals, and Curschmann's Spirals, are not at all necessary to make a diagnosis of asthma. Coryza is present only if the patients have, in addition to asthma, a concomitant allergic or infectious rhinitis. Patients with mild cases of asthma often complain of heaviness on the chest. Outside cold weather below 40 F may trigger or bring on such an attack of asthma, which is relieved when the patient enters a warm room. Such mechanisms of inducing symptoms of asthma are usually nonspecific and include exertion, sudden laughter, and undue emotional stress. The best diagnostic finding in the symptom complex of asthma is the objective one of the presence of dry rales in the chest, most pronounced on expiration. Having ruled out angina pectoris, the questioner may assume this diagnosis of asthma in his patients if, on auscultation of the chest, he finds these characteristic rales.

PHYSIOLOGICAL CHANGES AFTER HYSTERECTOMY

To the Editor:—*What would be the physiological changes following a hysterectomy before menopause in a nulliparous woman? Does the estrogen cycle continue exactly as before, with the possibility of premenstrual tension, breast changes, and other factors? How do the severity and time of onset of menopausal signs and symptoms compare with what might have occurred had not the uterus been removed?*

M.D., Saskatchewan, Canada.

Answer.—Amenorrhea is the principal physiological change following a total hysterectomy. If a subtotal hysterectomy is done, periodic menstrual bleeding of some degree may persist. Aside from

The answers here published have been prepared by competent authorities. They do not, however, represent the opinions of any medical or other organization unless specifically so stated in the reply. Anonymous communications cannot be answered. Every letter must contain the writer's name and address, but these will be omitted on request.

these factors, there is no evidence that total hysterectomy results in hypo-ovaria or hyperovaria. Premenstrual tension, painful breasts, and other signs which have been present before surgery will frequently disappear after hysterectomy. On the other hand weight gain, retention of fluid, and painful breasts may first occur after a hysterectomy. Although the idea is prevalent that the menopause occurs soon after hysterectomy because of curtailment of some of the blood supply to the ovary, there is no scientific evidence to prove it. Being cognizant that the menopause may occur between the ages of 30 and 52, one can understand how the menopause may happen almost simultaneously with the removal of the uterus. It has been shown beyond a doubt that ovarian activity may go on for a long period after a physiological menopause or after amenorrhea is brought on surgically. The uninformed patient may connect the hysterectomy with the menopause because of the absence of menstruation.

EMULSIFYING AGENTS AND WEIGHT GAIN

To the Editor:—*Have detergents, such as polysorbate 80 or pancreatin, any place in the management of postgastrectomy (dumping) syndrome? The patient in mind had a subtotal resection with gastrojejunostomy, and she now has a mild dumping syndrome and diarrhea one to three days a week. Despite a good intake of calories, she cannot be made to gain weight, even with the use of such steroids as norethandrolone. Antispasmodics have been tried.*

M.D., California.

Answer.—Factors leading to development of the dumping syndrome are not well understood; both organic and psychological causes have been implicated. It is unlikely that defective handling of fat accounts for the postprandial weakness, diarrhea, and other features which are commonly observed in this condition. Therefore, administration of emulsifying agents or of pancreatic extract would not be expected to effect improvement of these symptoms. So far as loss of weight is concerned, it seems clear that excretion of an abnormal quantity of fat in the feces might contribute to this symptom. Some reports have indicated that administration of emulsifying agents or of a combination of pancreatic extract and bile salts (but not pancreatic extract alone) may lead to partial correction of this defect. Thus far, however, results usually have been inconclusive and the value of these agents in treatment not proved. If the patient can be encouraged to take an extra 500 calories of food each day and to avoid the use of fluids at mealtime, nutrition may be, as it often has been, improved by these measures alone.

HYPNOSIS IN DERMATOLOGY

To the Editor:—*A patient has inquired regarding the possible use of hypnotism in a severe, chronic, long-standing bullous type of eczema. There have been articles on its use in most other fields, but none have been seen in dermatology. Please give information on its use in this field.*

C. D. Klaus, M.D., Iron Mountain, Mich.

Answer.—The use of hypnosis in dermatology has been reported in the literature for some years. Several of the recent books on dermatology have emphasized the emotional factors in skin conditions, especially in eczema. Gordon (Foreign Letters, *J. A. M. A.* **158:**1458 [Aug. 20] 1955) reported the use of hypnosis in a patient with dermatitis herpetiformis of 10 years' duration. The lesions cleared rapidly under hypnosis and remained so after a two-year follow-up. Any psychiatrist in America who has used hypnosis has undoubtedly found it effective in such cases. The following references are worthy of note.

References

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Stokvis, B.: Application of Hypnosis in Organic Diseases, J. Clin. Exper. Hyp. **4:**79, 1956.

REMOVAL OF VOCAL CORD POLYPS

To the Editor:—*What causes polyps to grow on the vocal cords in young children? Should they be removed as soon as diagnosed or when they begin to cause respiratory distress? How often do they recur, and what is the best method of removal to prevent their recurrence?*

M.D., Georgia.

Answer.—Polyps and polypoid chorditis occur much more rarely in young children than in adults. There is no great urgency in their removal if they are not obstructive, but the best method of removal is superficial stripping of the cords under direct laryngoscopy. It is absolutely necessary to avoid trauma to the underlying tissues of the cord if a good ultimate voice is to be obtained. Allergy may be a factor in these cases, and attention to the allergic indications is most important.